

C BODY

INTRODUCTION



This manual has been prepared for use by all body technicians involved in the repair of Chrysler C Body models.

This manual shows:

- Typical panels contained in C Body models
- The weld locations for panels
- The types of welds for the panel
- What panels must be replaced and not repaired

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Chrysler Motors reserves the right to make improvements in design or to change specifications to these automobiles without incurring any obligation upon itself.

DODGE DYNASTY-CHRYSLER LANDAU

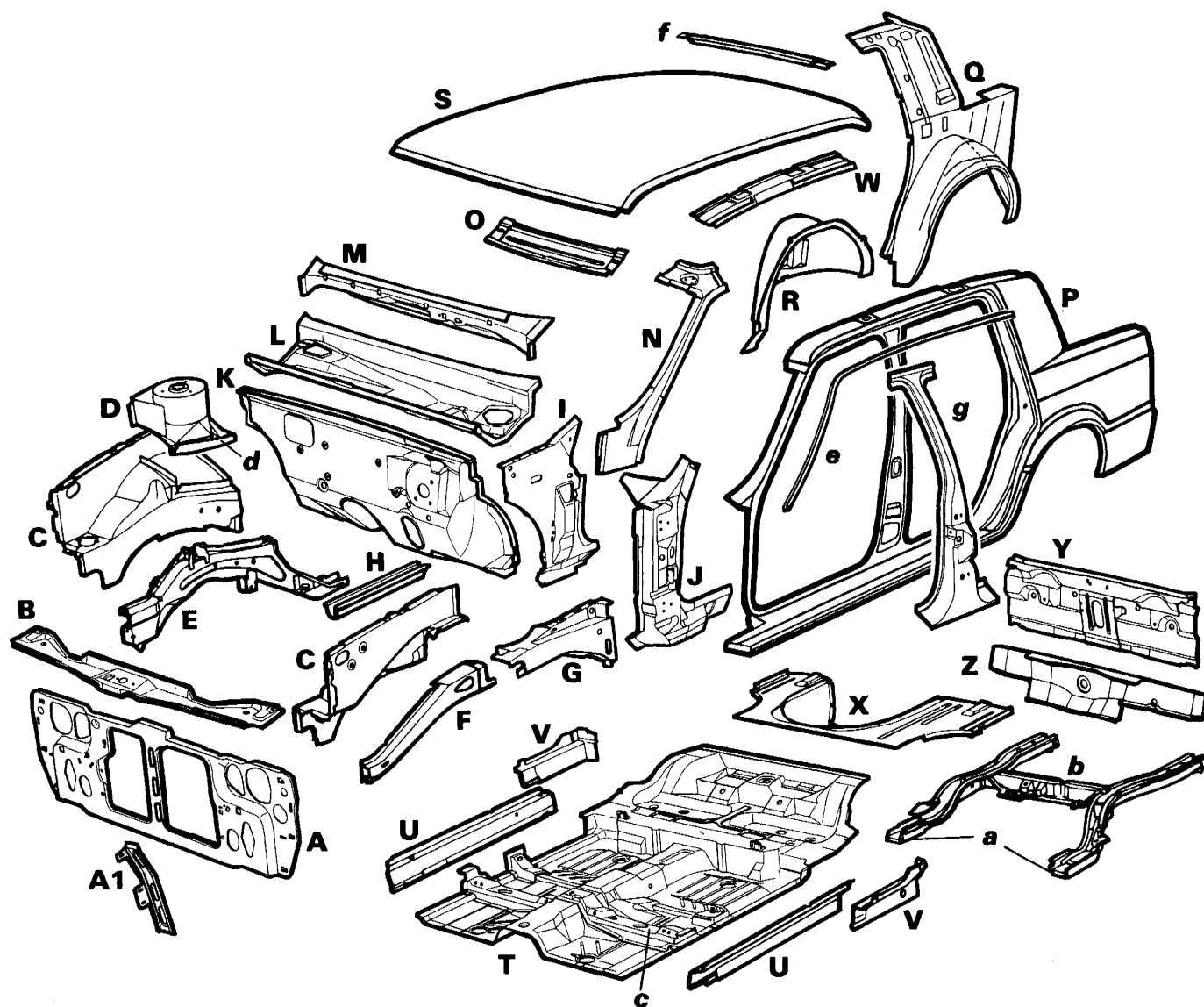
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Body Construction Characteristics

C BODY COMPONENTS





BODY PANELS ILLUSTRATED

- A.** Radiator support
- A1** Radiator center support
- B.** Tie bar panel
- C.** Fender inner shield
- D.** Strut tower reinforcement
- E.** Front side rail
- F.** Upper splash shield beam
- G.** Hinge pillar extension
- H.** Front side rail extension
- I.** Cowl side rail
- J.** Front hinge pillar
- K.** Dash panel
- L.** Cowl plenum
- M.** Cowl top
- N.** Windshield frame side inner
- O.** Center upper windshield frame
- P.** Side aperture
- Q.** Inner quarter/outer wheelhouse
- R.** Inner wheelhouse
- S.** Roof panel
- T.** Front floor pan
- U.** Inner sill panel
- V.** Side sill panel extension
- W.** Roof rail inner
- X.** Rear floor pan
- Y.** Tail panel
- Z.** Lower tail panel
- a.** Rear side rails
- b.** Rear side rail crossmember
- c.** Front floor pan crossmember, seat mount
- d.** Strut tower extension to dash
- e.** Aperture retainer, drip rail
- f.** Rear roof brace
- g.** Center hinge pillar

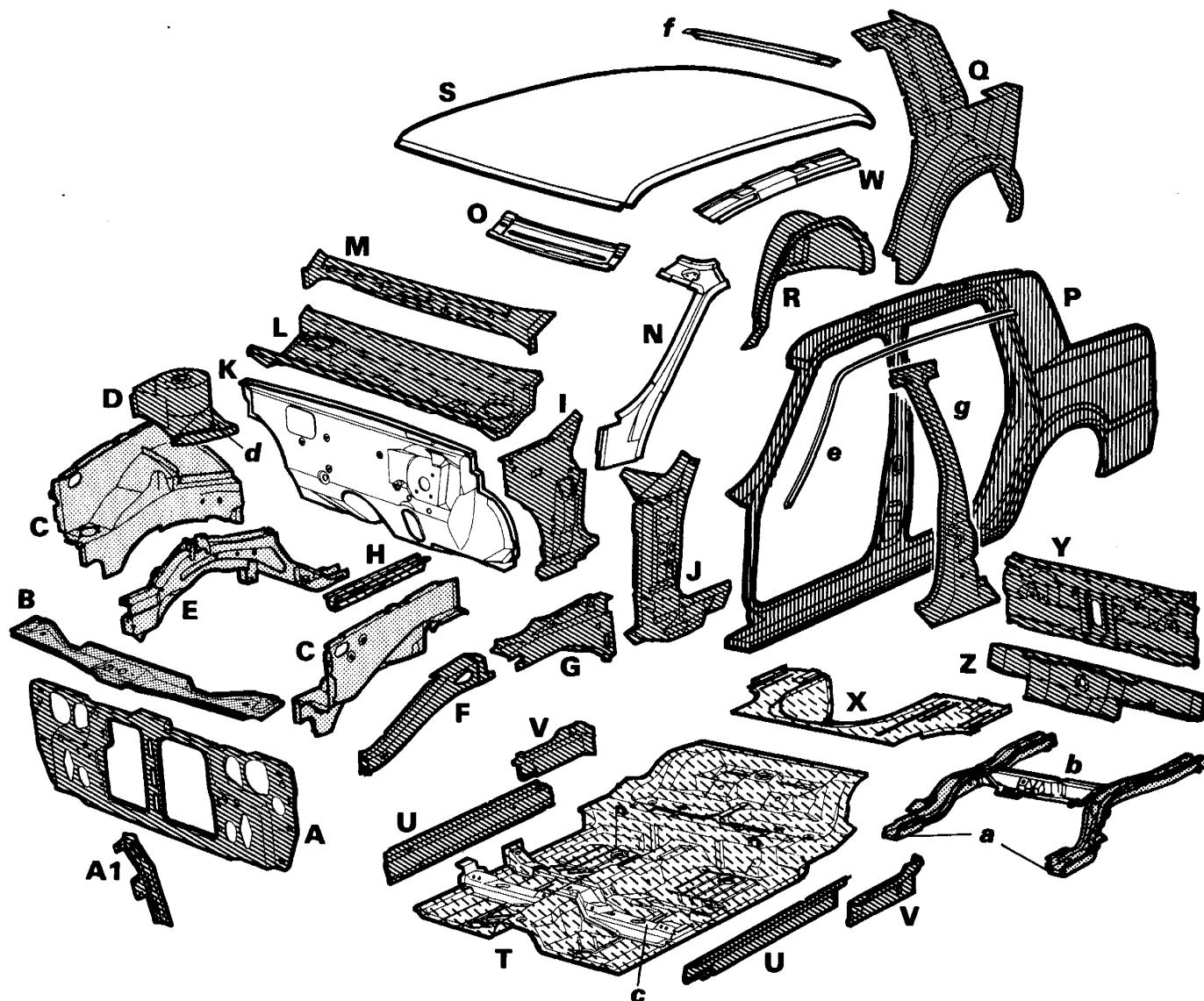
Parts Not Illustrated (Partial list):

- Glass assembly — windshield
- Outer hood panel
- Inner hood panel
- Bumper assembly — front and rear
- Energy absorbing unit — front and rear
- Front fender assembly
- Steering and brake bracket support
- Steering column support
- Brace — lower control arm bracket support R-L
- Rear suspension control arm support
- Rear suspension radius bar support
- Door reinforcement, impact bar
- Inner door structure
- Outer door structure
- Fuel filler door
- Rear window glass
- Hood hinge reinforcement
- Plenum panel water deflector
- Inner liftgate panel
- Outer liftgate panel
- Front floor pan gearshift mount
- Tail panel extension
- Wheelhouse gusset



Body Construction Characteristics

CORROSION PROTECTION C-BODY



One-Side
Galvanized



Two-Side
Galvanized



1½-Side
Galvanized



Two-Side
Galvannealed



Zincrometal



The following measures have been implemented in order to provide maximum corrosion prevention and protection.

1. The use of galvanized coatings throughout the body structure.
2. Zincrometal is used on some body panels.
3. Cationic electrode position undercoating is used on the complete body in almost all instances.
4. Body sealing.
5. Stone-chipping resistant primer application.
6. Underbody corrosion prevention.

Definitions of Coated Steels:

One-Side Galvanized MS 6000-60 — Represents a one side free zinc galvanized coating on one side of the hot or cold rolled low carbon minimum spangle sheet or strip applied by the hot dipping process.

One-and-a-half-Side Galvanized (Differentially Coated) MS 6000-61X — Represent a coated steel in which the heavier coated side shall have a free zinc coating and will be the unexposed side. A lighter coating side will have an alloy coated surface which will be the exposed side.

Two-Side Galvanized MS 6000-66 — Represents an evenly zinc coated steel on both sides.

Two-Side Galvannealed MS 600-44A — Represents a two-side zinc coated steel in which the coating is fully alloyed with the sheet or strip surface.

Zincrometal MS 5973 — Represents a standard low carbon sheet steel product which is coated with a chromate/zinc dust complex with a subsequent zinc-rich primer coating.

Electrogalvanized MS 6000-60P — Represents a sheet steel base metal product which is zinc-coated by electroplating.

PARTIAL LIST OF STEEL APPLICATIONS

ONE-SIDE GALVANIZED STEEL

- * Hood outer panel
- Front frame rail, extension

TWO-SIDE GALVANIZED STEEL

- * Hood inner panel
- Hinge pillar extension
- Side shield upper beam
- Tower reinforcement
- * Lower control arm bracket
- Cowl top panel
- Side sill inner
- Inner quarter, outer wheelhouse
- Inner wheelhouse
- * Inner wheelhouse brace
- Cowl side panel
- Hinge pillar
- * Inner door shell structure
- Tail panel
- Lower tail panel (rear crossmember)
- * Tail panel extension
- * Rear tail panel drain through
- * Rear quarter panel drain through inner quarter panel brace
- Radiator support

ONE AND ONE-HALF SIDE GALVANIZED STEEL

- * Front fender
- * Outer door skin side aperture
- * Rear lift gate inner
- * Rear lift gate outer

GALVANNEALED STEEL

- Radiator tie bar support
- Front fender inner shield
- Front side rails
- Rear frame rails

ZINCROMETAL

- Front floor pan
- Rear floor pan

* Indicates panels not shown in illustration.



Body Construction Characteristics

HIGH STRENGTH STEELS (HSS)

High tensile steel strengthened by solid solution has been used for the parts listed below.

The tensile strength of these high strength steel panels is much greater than the tensile strength of mild steel, nevertheless body work (sheet metal work, painting, etc.) can be performed by using the same procedures as those for mild steels.

DO NOT HEAT ANY OF THESE STEELS OVER 700°.

1988 CHRYSLER C-BODY HSS

Part No.	Description	Material Specification	Material Description
4206247	Bracket — Spare Wheel Anchor Bolt	MS6206	CR-DQ-CQ
4314133	Bracket — Rear Floor Pan Side Rail Shipping — Left	MS5042	CR-DQ-CQ
4314417	Reinforcement — Rear Floor Pan Rear Susp. Crossmember Intl.	MS6206	CR-DQ-CQ
4314425	Reinforcement — Rear Floor Pan Side Rail Eau Mtg. — Left	MS5242	CR-DQ-CQ
4365168-9	Reinforcement — Rear Door Impact Bar	MS26480	CR-HSS-SK
4371632	Reinforcement — Rear Floor Pan, Rear Susp. C/Member-Extl.	MS6206	CR-DQ-CQ
4416450	Reinforcement — Rear Floor Pan S/Rail Eau Mtg. & Shipping	MS6000-44BA	CR-DQ-SK
4475016-7	Extension-Sill Inner Rear	MS6000-66V	HSS-LA-SK
4475023	Reinforcement — Rear Floor Pan Rear Suspension Crossmember	MS5042B	CR-DQ-CQ
4475214-5	Rail — Rear Floor Pan Side	MS6000-44BA	CR-DQ-SK
4228251	Brace — Rear Suspension Track Bar Mounting	MS6000-44VA	HR-HSS-SK
4296375	Bracket — Front Side Rail Engine Mount Lower — Left	MS6000-44BA	CR-DQ-SK
4296420-1	Support — Front Side Rail Front Susp. Crossmember, Front	MS6000-44BA	CR-DQ-SK
4296800-1	Support — Front Side Rail Front Suspension Crossmember	MS6000-44BA	CR-DQ-SK
4314546-7	Reinforcement — Cowl S/Panel Hood Hinge	MS6000-44BA	CR-DQ-SK
4386366	Rail — Front Side Rail, Front Right	MS6000-44BA	CR-DQ-SK
4386367	Rail — Front Side Rail, Front Left	MS6000-44BA	CR-DQ-SK
4386582	Beam — Front Fender Shield Load, Right	MS6000-44BA	CR-DQ-SK
4386583	Beam — Front Fender Shield Load, Left	MS6000-44BA	CR-DQ-SK
4440736	Reinforcement — Front Side Rail Front Rail, Right	MS6000-44BA	CR-DQ-SK
4440737	Reinforcement — Front Side Rail Front Rail, Left	MS6000-44BA	CR-DQ-SK

Body Construction Characteristics



1988 CHRYSLER C-BODY HSS

Part No.	Description	Material Specification	Material Description
4475264	Plate – Dash Panel Front Rail Component, Right	MS6000-44VA	HR-HSS-SK
4475265	Plate – Dash Panel Front Rail Component, Left	MS6000-44VA	HR-HSS-SK
4490136	Rail – Front Side Rail Rear, Right	MS6000-44VA	HR-HSS-SK
4490137	Rail – Front Side Rail Rear, Left	MS6000-44VA	HR-HSS-SK
4490140	Reinforcement – Front Side Rail Inr., Right	MS6000-44VA	HR-HSS-SK
4490141	Reinforcement – Front Side Rail Inr., Left	MS6000-44VA	HR-HSS-SK
4490142-3	Doubler – Front Side Rail Front Otr.	MS6000-44VA	HR-HSS-SK

Note: When not sure of steel materials always treat as high strength steel.

NOTES



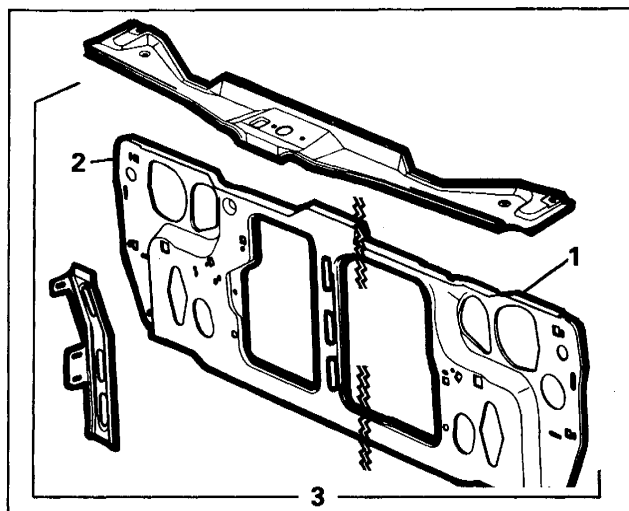
Body Construction Characteristics

FRONT BODY

Headlamp Support

Replacement parts are available in two different configurations: the entire panel in a one-piece construction and the left and right sides as separate pieces.

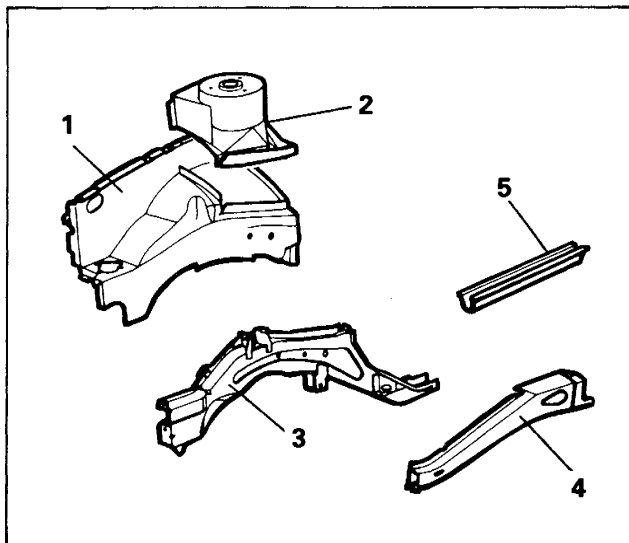
1. Headlamp support, L.H.
2. Headlamp support, R.H.
3. Headlamp support assembly



Front Shields and Reinforcements

Replacement parts are available in partial assemblies:

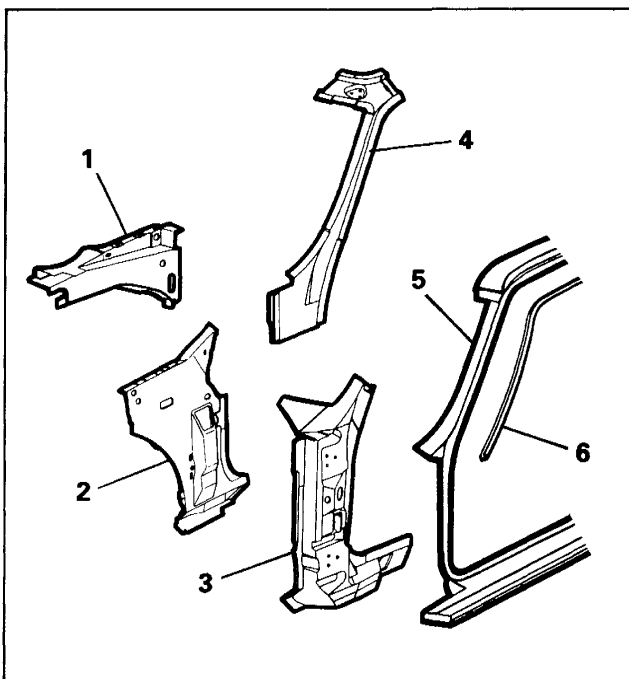
1. Fender inner shield
2. Tower reinforcement
3. Front side rail
4. Upper splash shield beam
5. Front side rail extension



Front Pillar

Replacement parts are available in very mild assemblies.

1. Hinge pillar extension
2. Cowl side panel
3. Front hinge pillar
4. Upper windshield pillar
5. Front side aperture
6. Drip rail



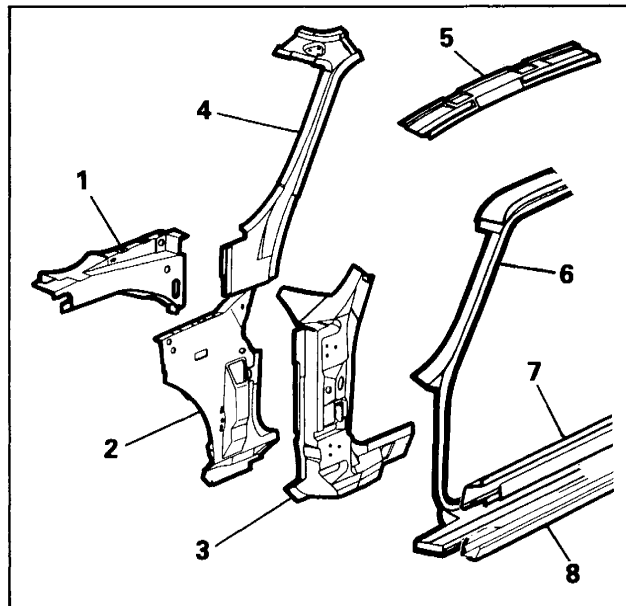


SIDE BODY

The side body construction is a separate design in which the independent individual panels are assembled by welding.

Front Side Structure

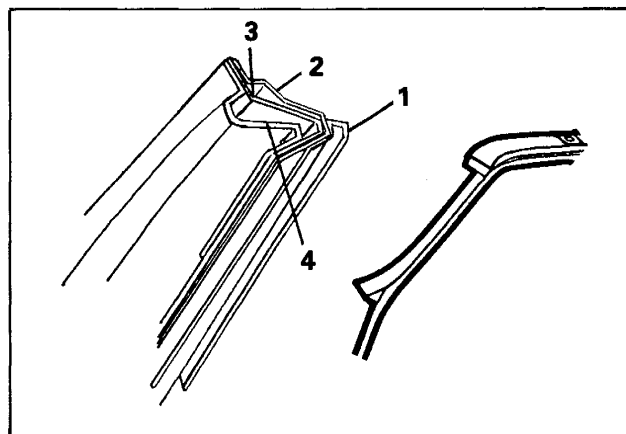
1. Hinge pillar extension
2. Cowl side panel
3. Front hinge pillar
4. Upper inner windshield frame
5. Inner roof side rail
6. Front side aperture
7. Inner side sill
8. Outer side sill



Front Pillar

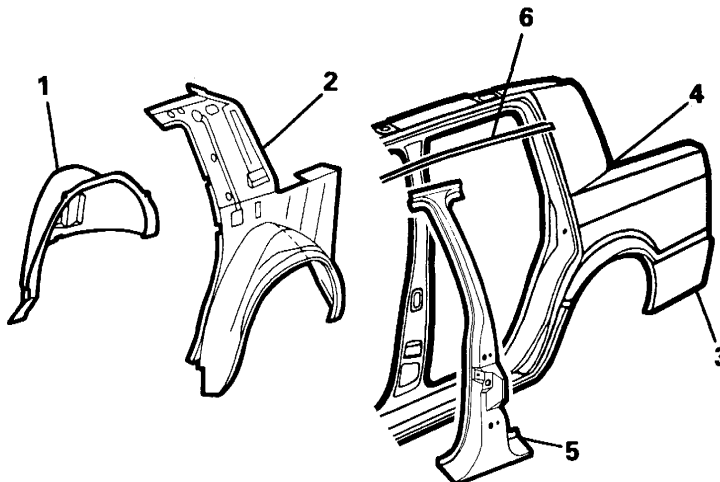
The full pillar is triple wall construction as shown in this illustration.

1. Drip rail
2. Side aperture
3. Center windshield frame
4. Inner windshield frame



Rear Side Structure

1. Rear wheelhouse, inner
2. Quarter panel, inner
3. Quarter panel, outer
4. Drain trough
5. Center hinge pillar
6. Drip rail



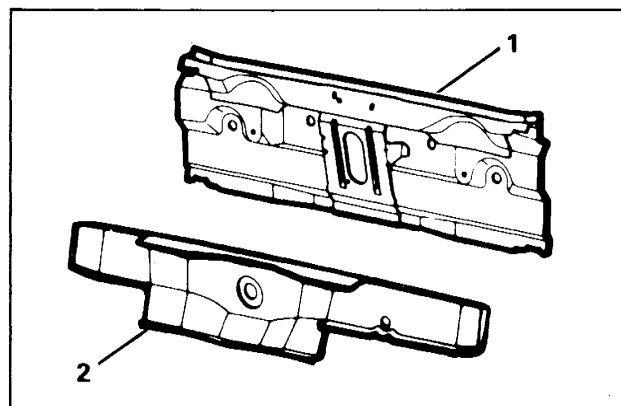


Body Construction Characteristics

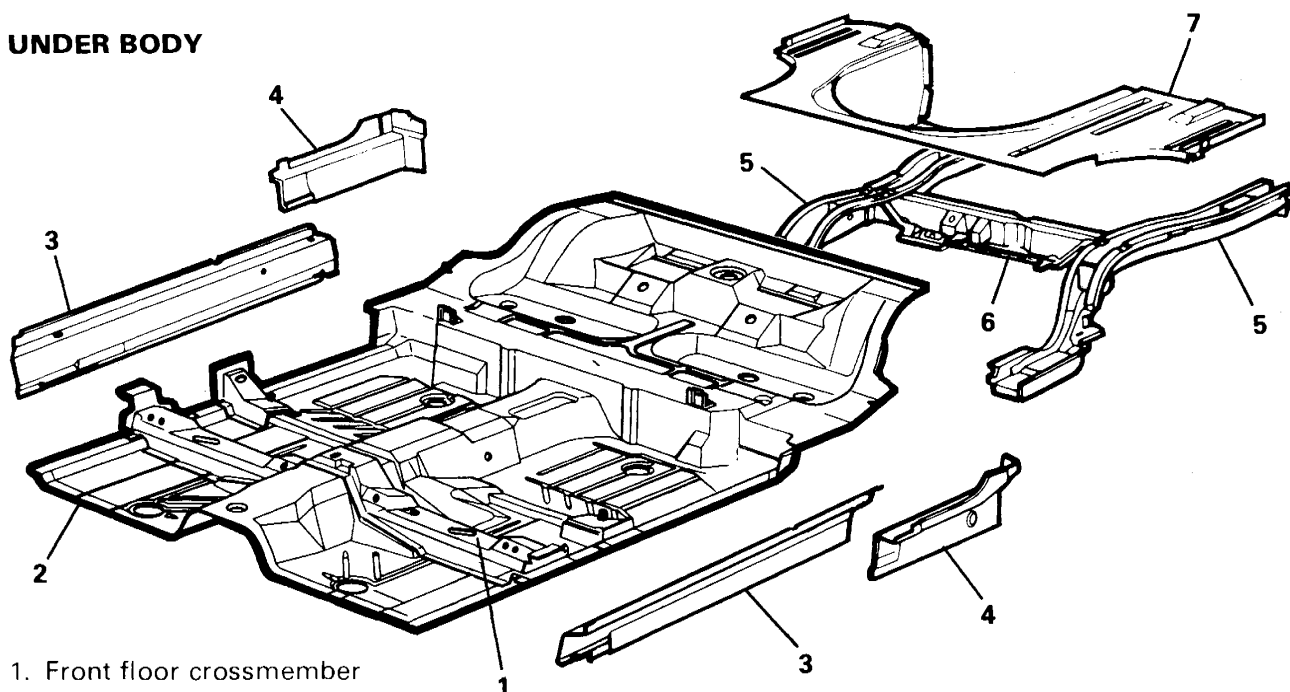
REAR BODY

Rear End Panel

1. Rear end panel (tail panel)
2. Lower tail panel or rear crossmember



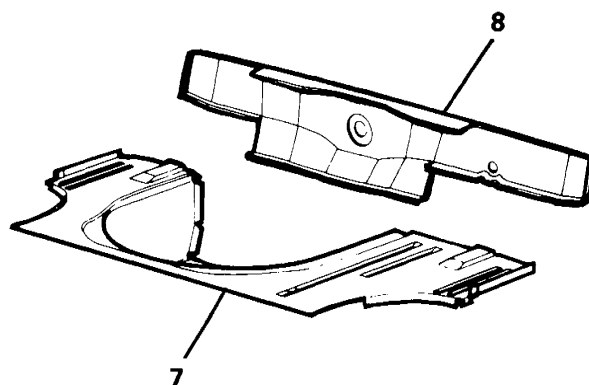
UNDER BODY



1. Front floor crossmember
2. Front floor
3. Side sill
4. Side sill extension
5. Rear side rail
6. Rear side rail crossmember
7. Rear floor pan
8. Rear crossmember or lower rear body panel

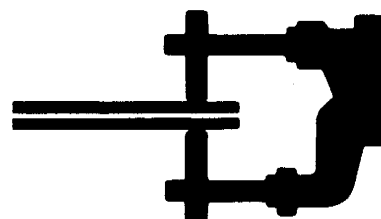
The Floor Pans

The floor pans are protected from rust with the use of zincrometal, inner side sills are two-side galvanized to protect them.



C BODY

WELDED PANEL REPLACEMENT



The basic parts of the body structure are the welded outer panels. Herein is a brief description of the placement of some of these panels.

NOTE: To insure the strongest, most durable and cleanest welds possible, do testing before and during all weld procedures. Always follow American Weld Society specifications and procedures.

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Headlamp Support	14
Headlamp Support (Part)	16
Hinge Pillar Extension	18
Upper Splash Shield Beam	20
Strut Tower Reinforcement	22
Front Side Rail & Extension	24
Front Hinge Pillar	26
Cowl Side Panel	28
Fender Inner Shield	30
Front Side Aperture	32
Side Sill	34
Center Pillar, Outer	36
Quarter Panel, Outer	38
Tail Panel, Rear Roof (Part), Rear Floor Pan (Part), Rear Shelf	40
Rear Floor Pan	42
Rear Side Rail Assembly	44
Roof Panel	46
Quarter Panel, Inner	48
Inner Wheelhouse	50




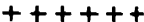

Explanation of Contents

EXPLANATION OF MANUAL CONTENTS

The major construction of a unibody automobile are welded panels and parts. Here are some examples for replacement of these parts.


Symbols

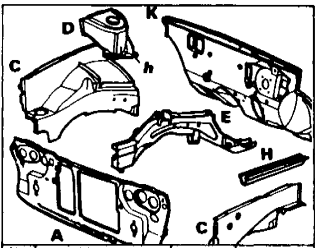
Some of the operations for panel replacement are designated by the following symbols.

		
Rough cutting of panel to be replaced	MIG Plug Weld	MIG Arc Welding

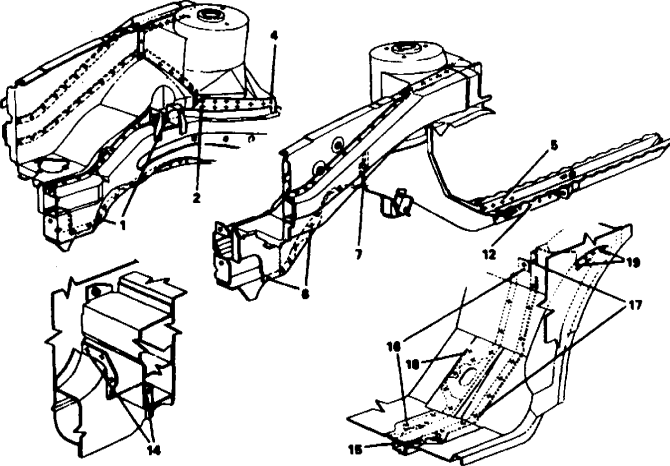
NOTE

Although spot welds are the nuts and bolts of the unibody vehicle, they will not be used as a repair symbol because of the lack of proper spot weld equipment in most shops.

 **Front Side Rail and Extension**



No.	Welded parts	F	R
1	E + C	RT.	22 P22
2	E + D	RT.	8 P6
3	E + D	LT.	7 P7
4	E + h		3 P3
5	E + H		4 P4
6	E + C		10 P10
7	E + C		1 P1
8	E + H		6 P6



No.	Welded parts	F	R
9	E + H	3	P3
10	E + H	1	P1
11	E + C	12	P12
12	E + H	5	P5
13	E + H	1	P1
14	E + A	5	P5
15	E + K	1	P1
16	E + K		P12
17	E + K	11	P11
18	E + K	1	P1
19	E + h	4	P4
20	E + D	MIG	MIG
21	E + D	MIG	MIG

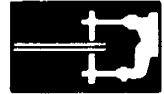
"F" indicates the number of factory welds to be separated.

"R" indicates the number of welds to be made and the method to be used when making repairs.

The welded components are indicated by using the designations given in the illustration below:

for example: "E and H" indicates that component E and component H shown in the top illustration are welded together.

If only a number is listed under the "F" it indicates that the method used at the factory was a spot weld; for all other methods, both the welding method and the number of welds will be indicated. For example, "F2, R P2" indicates that the 2 spot welds made at the factory should be replaced by 2 plug welds if repairs are made.



NOTE

Do some test welds to double check your equipment and to insure your welds are of the very best quality and conform to the American Welding Society standards.

NOTE: For weld specifications contact:

American Welding Society
550 Northwest Le Jeune Rd.
P.O. Box 351040
Miami, Florida 33135
Phone: (305) 443-9353

Points which require particular attention during welded panel replacement work.

The panel removal instructions and accompanying illustrations are given in the order in which the work is to be performed.

The panel installation instructions and accompanying illustrations are given in the order in which the work is to be performed. In order to keep the instructions brief and simple, obvious work procedures (such as removal of a panel after it has been cut) have been omitted where possible.

Front Side Rail and Extension



NOTES WITH REGARD TO REPAIR WORK

Because the motor and transmission as well as the front suspension assembly all mount to the front side rails, it is extremely important that the alignment, as well as the workmanship, are perfect when doing repair or replacement work in this area.

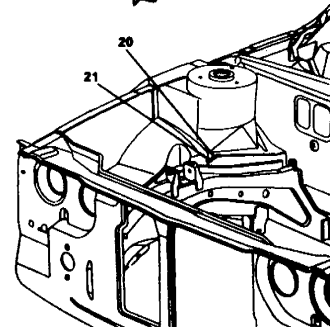
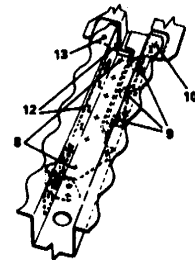
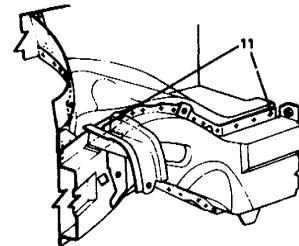
REMOVAL

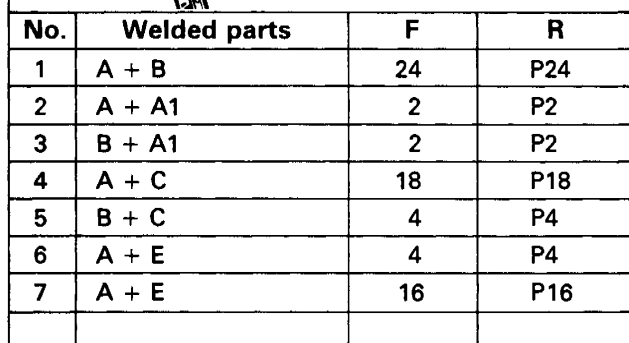
1. Cut the spot welds as cleanly as possible and then the braze welds should be ground apart.
2. Clean and prep all surfaces to be welded later.

INSTALLATION

1. Temporarily mount the front side rail and make sure all adjoining panels line up. Don't estimate, make perfect measurements.
2. Use a tool to place 5/16" holes in the front side rail at the same places the spot welds were located in the old rail.
3. Do the plug welding, do the MIG welding.

Treat all exposed metal with an appropriate metal conditioner or self-etching primer. Follow paint manufacturer's instructions for corrosion protection.



[illegible]



NOTES WITH REGARD TO REPAIR WORK

- Because the headlamps, inner shield, front side rail, splash shield beam and other parts are mounted to the headlamp support, be sure to make careful measurements and maintain the correct dimensions when doing the repairs.
- For points which have no specific instructions with regard to measurements in "Body Dimensions", determine two points on the headlamp support which are positioned symmetrically, and then confirm that the distances from the body center point to the left point and to the right point are the same.

REMOVAL

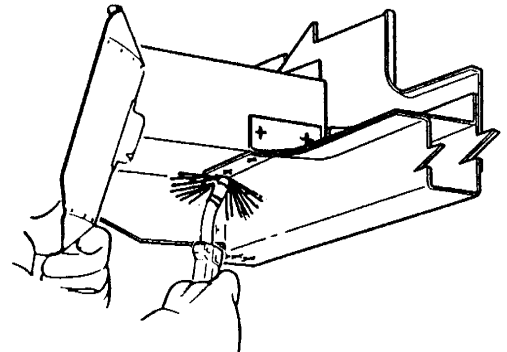
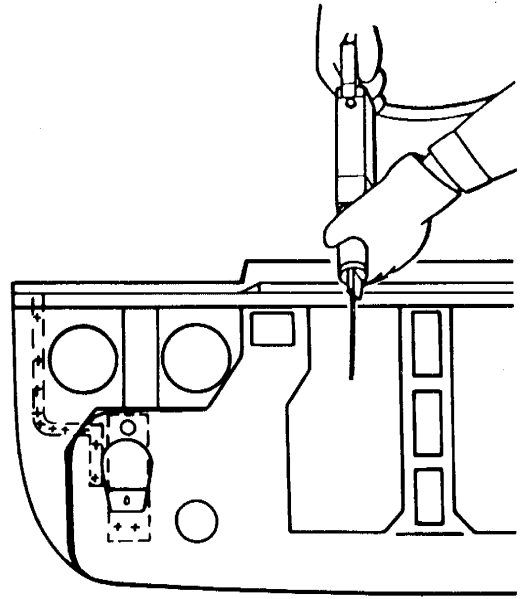
1. Make a rough cutting of the headlamp support.
2. Cut and separate the spot-welded locations.

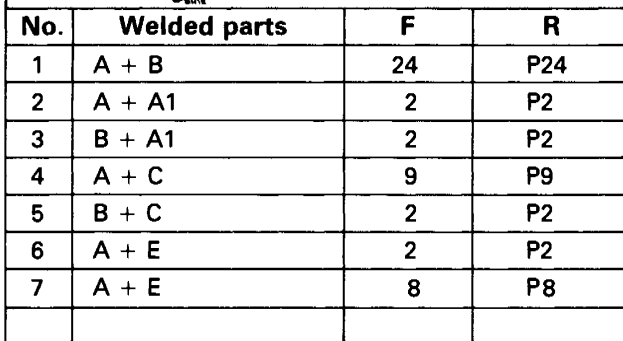
Note: If using a 5/16 hole saw the job is fairly simple.

INSTALLATION

1. Temporarily mount the new headlamp support assembly onto the body.
2. Measure each part and make any corrections necessary to obtain agreement with the proper body dimensions.
3. Do the plug welding.

Treat all exposed metal with an appropriate metal conditioner or self-etching primer. Follow paint manufacturer's instructions for corrosion protection.



[illegible]



NOTES WITH REGARD TO REPAIR WORK

- The headlamp support directly affects the strength of the body; be sure that it is butt-welded securely.
- The illustrations here are for the left side; however, the procedures are the same for both the left and right sides.

REMOVAL

1. Use a pneumatic saw to cut the upper part of the headlamp support at a point you have pre-determined by accurate measurements.
2. Use a pneumatic saw to cut the lower portion of the headlamp support at a point you have pre-determined by accurate measurements.

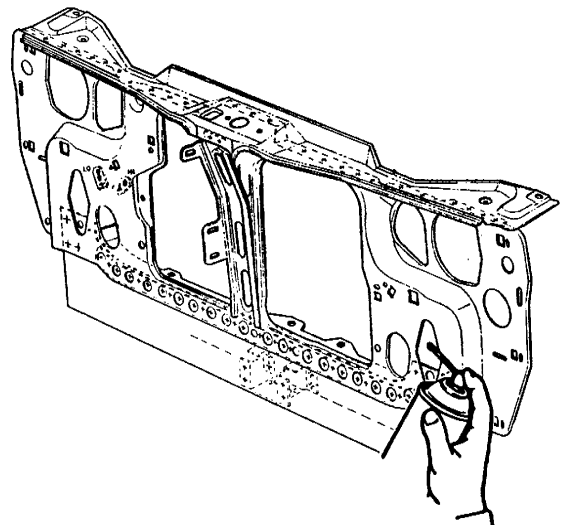
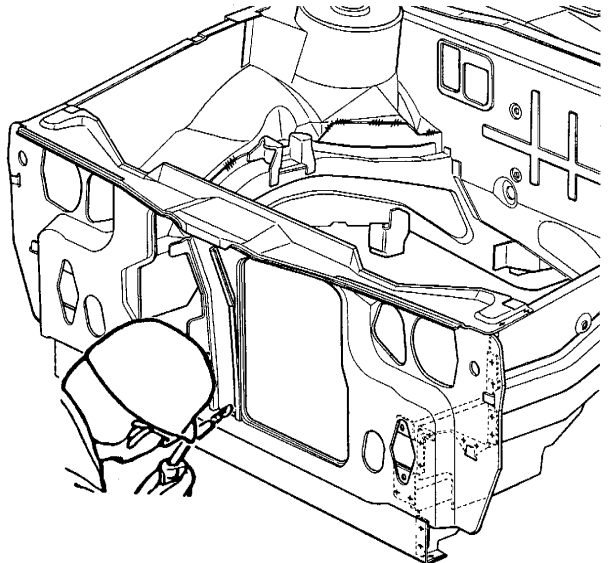
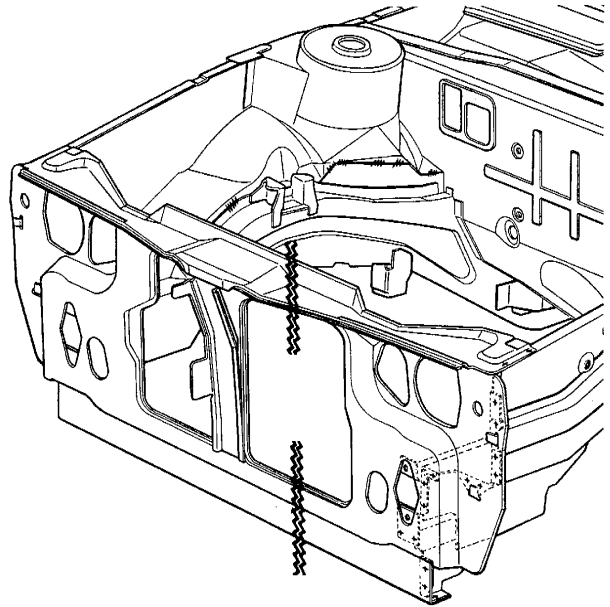
Caution:

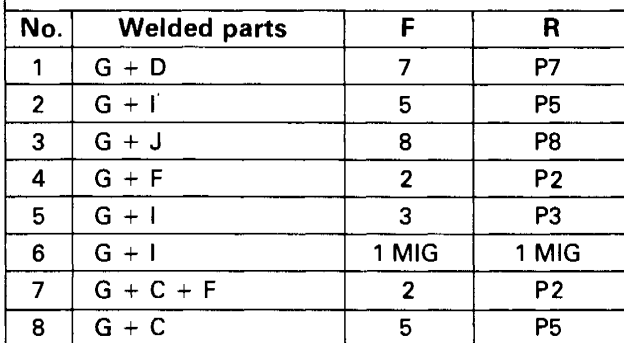
- **Do not cut at a location where there is a bead or a welded nut.**
3. Cut and separate the spot-welded locations.
 4. Remove the headlamp support side.

INSTALLATION

1. Measure the upper and lower parts of the headlamp supports and mark them according to your measurements.
2. Trim your headlamp supports so they will mate properly and give perfect alignment.
3. Butt weld the upper parts of the headlamp support and then lower parts of the headlamp support.
4. Do the spot welding work.
5. Spray anti-corrosion agent over repair area (inside and out).

Treat all exposed metal with an appropriate metal conditioner or self-etching primer. Follow paint manufacturer's instructions for corrosion protection.



[illegible]

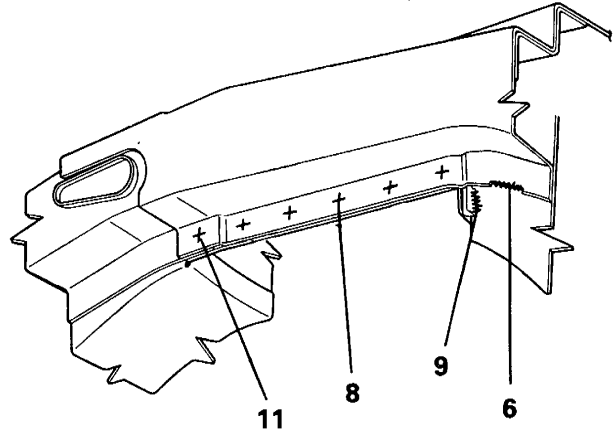


NOTES WITH REGARD TO REPAIR WORK

- Because the support given by the hinge pillar extension is so great, it is one of the most important structure pieces.
- Reuse the hinge pillar extension panel if at all possible, use a 5/16 hole saw to cut all spot welds, and a die grinder stone to clean all MIG welded areas. This will let you reuse the panel; just plug weld the 5/16 holes back up after repositioning it.

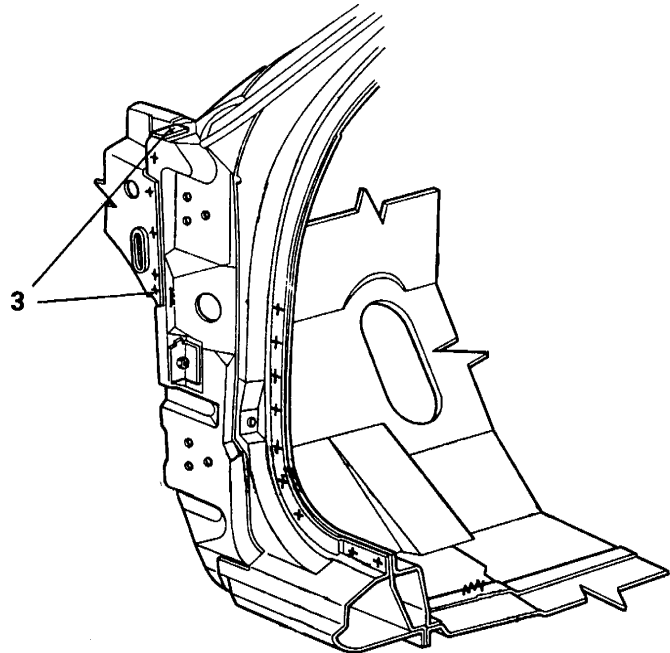
REMOVAL

1. Remove the hinge pillar extension panel. Note step (2) above is for reuse of the panel.
2. Clean and prep all surfaces for later work and to ensure a good appearing job when finished.

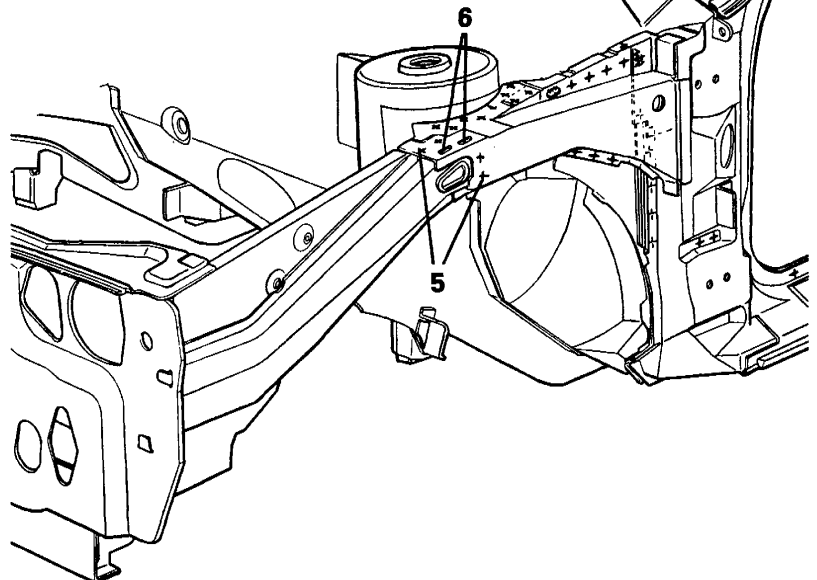
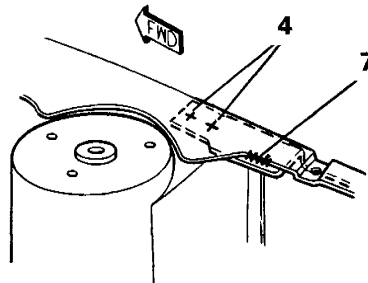
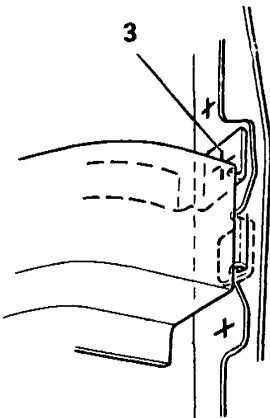
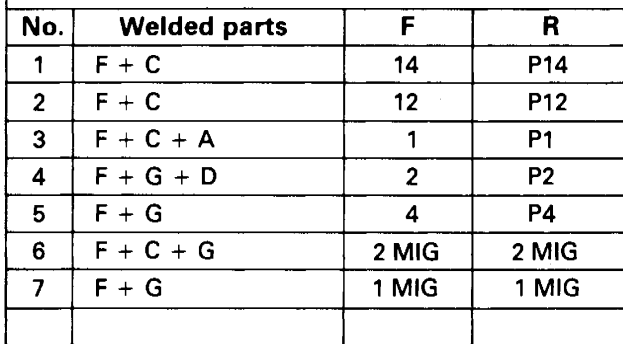


INSTALLATION

1. After checking alignment with other panels, if you are to use the original hinge pillar extension panel just plug weld it into place.
2. When using a new hinge pillar extension some technicians will use a tool comparable to a Whitney punch to punch 5/16 holes in the new panel, making it very easy to plug weld back into place.
3. Plug weld the panel back into position.



Treat all exposed metal with an appropriate metal conditioner or self-etching primer. Follow paint manufacturer's instructions for corrosion protection.



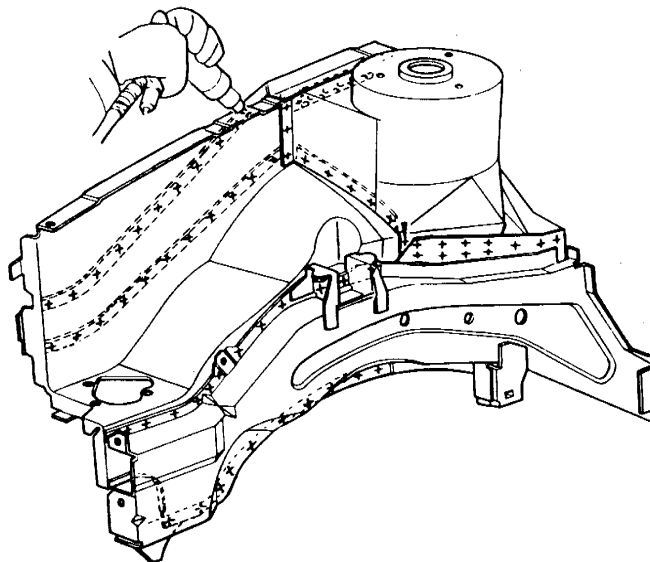


NOTES WITH REGARD TO REPAIR WORK

- The shield upper beam is covered on the end by the hinge pillar extension. This will have to be dealt with before you can remove the beam.

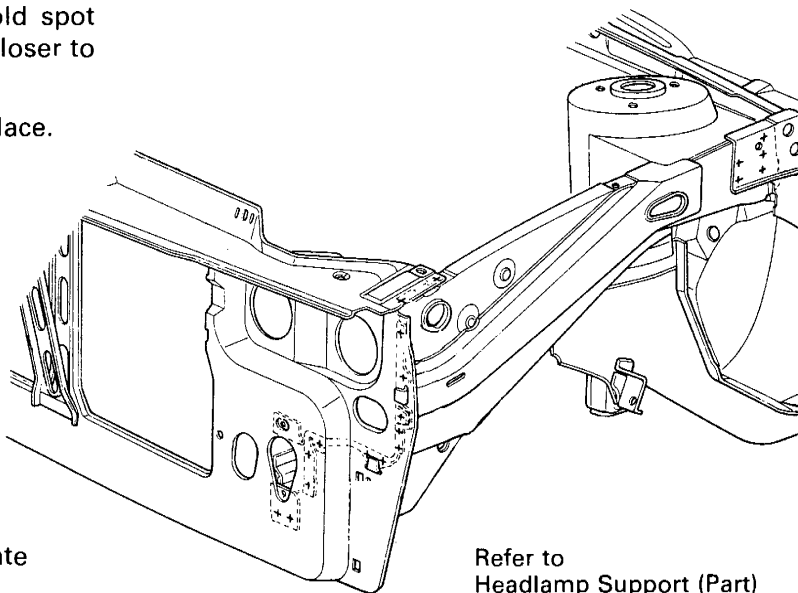
REMOVAL

1. Remove the hinge pillar extension. Be careful when cutting spot welds with hole saw (don't cut too deep).
2. The shield upper beam is now accessible, because all the spot welds are now easy to get to. Use a 5/16 hole saw to cut them.
3. If the beam was not damaged in the accident, you now have the beam off but ready to put back on using plug welds.



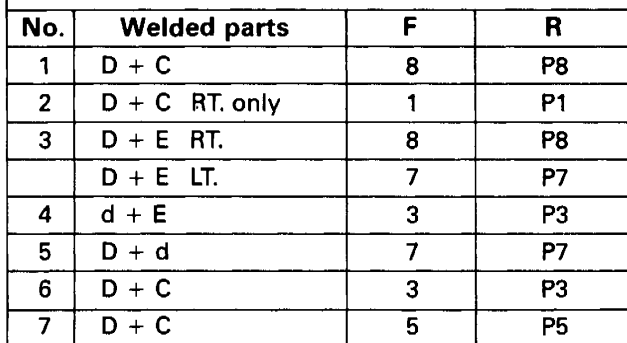
INSTALLATION

1. Clean all surfaces to be worked to ensure good fit.
2. If using a new shield upper beam the placement of 5/16 holes in the position of the old spot welds will make the job stronger and closer to original.
3. Plug weld the shield beam back into place.

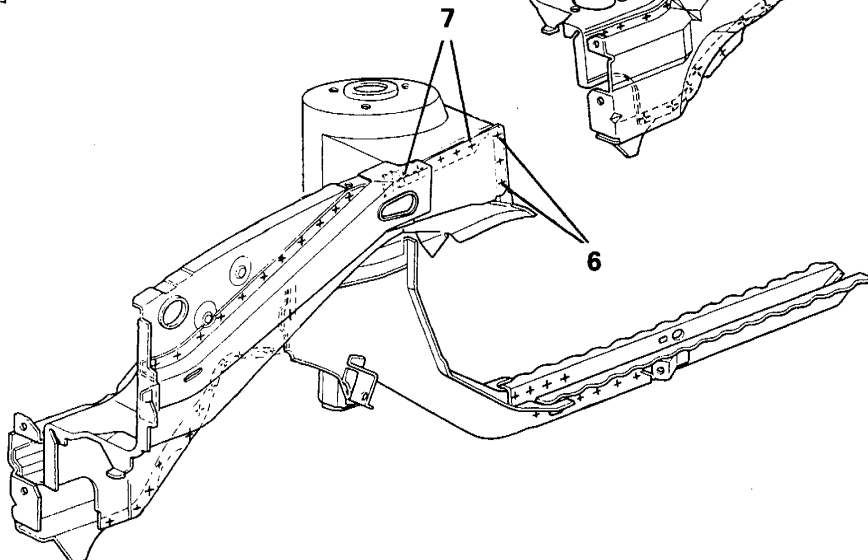
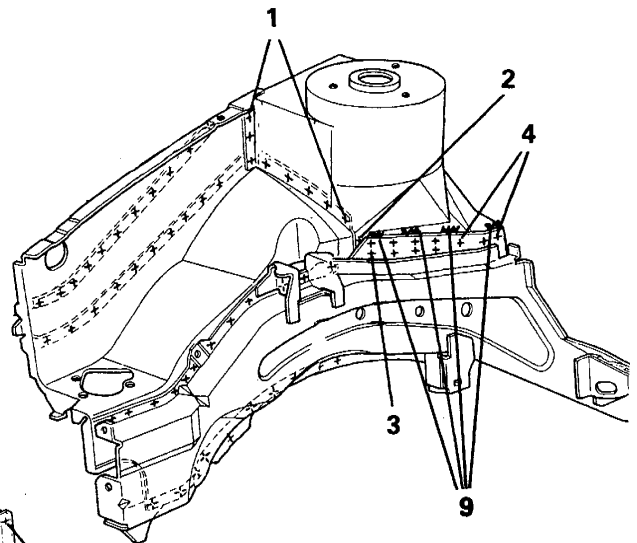


Treat all exposed metal with an appropriate metal conditioner or self-etching primer. Follow paint manufacturer's instructions for corrosion protection.

Refer to
Headlamp Support (Part)



A technical line drawing of a mechanical assembly, likely a part of a machine. The drawing shows a perspective view of a component with a handle-like structure on the left and a curved, flared section on the right. Numbered callouts (1 through 7) point to specific features: 1 points to a small rectangular feature on the handle; 2 points to a small rectangular feature on the curved section; 3 points to a small rectangular feature on the curved section; 4 points to a small rectangular feature on the curved section; 5 points to a small rectangular feature on the curved section; 6 points to a small rectangular feature on the curved section; 7 points to a small rectangular feature on the curved section. The drawing is a black and white line drawing with no shading.





NOTES WITH REGARD TO REPAIR WORK

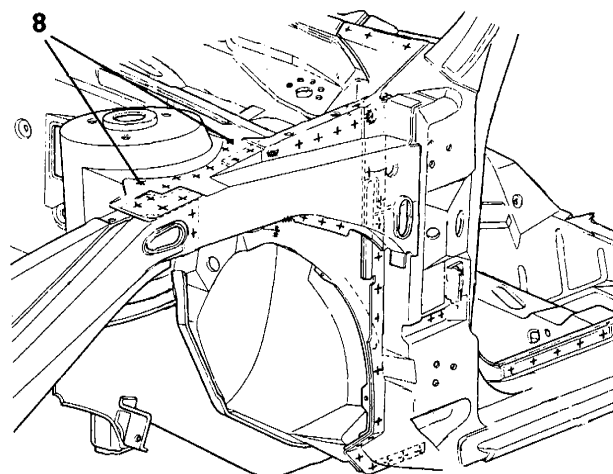
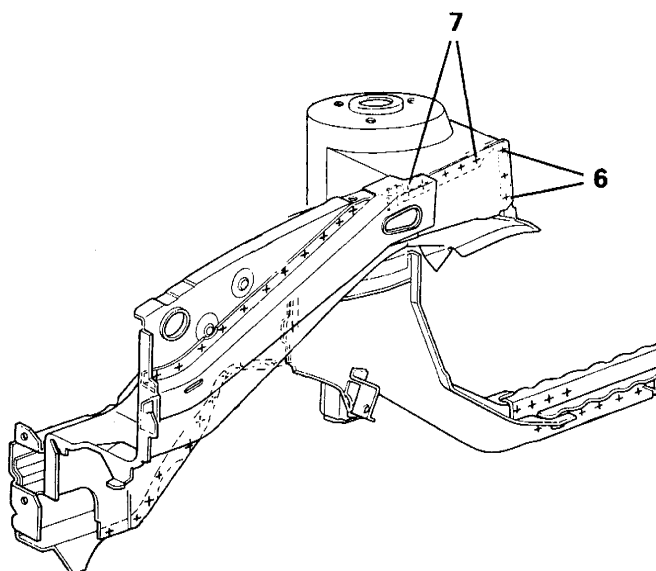
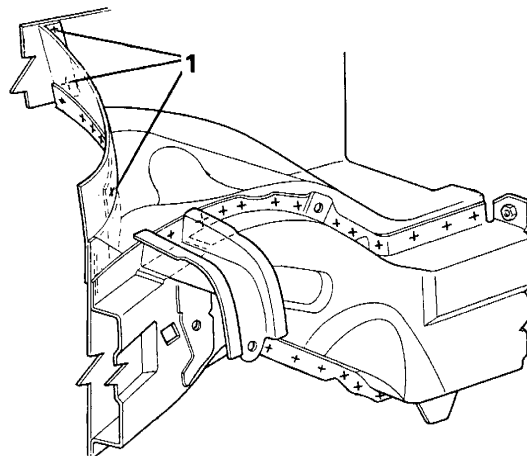
- Because the tower touches so many of the front structure parts, and determines accuracy of the alignment, it has to be perfect.

REMOVAL

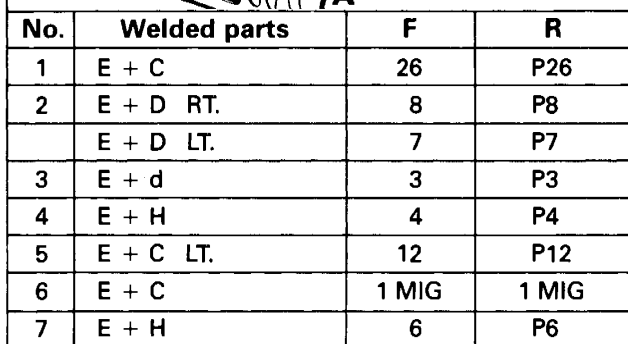
This panel can be difficult to get to; specialty tools such as tight corner drill motors with the 5/16 hole saw will help. A die grinder will be helpful and any other tool designed to get into tight places and cut accurately.

INSTALLATION

1. Clean all connecting parts to make installation easier.
2. If using a new tower, prepunch holes for plug welds.
3. Make sure alignment is correct to the point of perfection.
4. Plug weld the tower reinforcement into place.



Treat all exposed metal with an appropriate metal conditioner or self-etching primer. Follow paint manufacturer's instructions for corrosion protection.



This technical drawing is an exploded view of a mechanical assembly, showing 18 numbered components. The components are distributed as follows:

- Top Left:** A large, complex bracket-like part (1) with a cylindrical mounting base (3) and a smaller internal component (2).
- Top Right:** A long, curved structural member (4) with a smaller bracket (6) and a base plate (5).
- Bottom Left:** A small, L-shaped bracket (13).
- Bottom Right:** A large, complex assembly consisting of a main body (14), a curved plate (15), a central plate (17), a side plate (16), and a top plate (18).

The diagram uses solid lines for the components and dashed lines to indicate the assembly path and alignment of the parts.



NOTES WITH REGARD TO REPAIR WORK

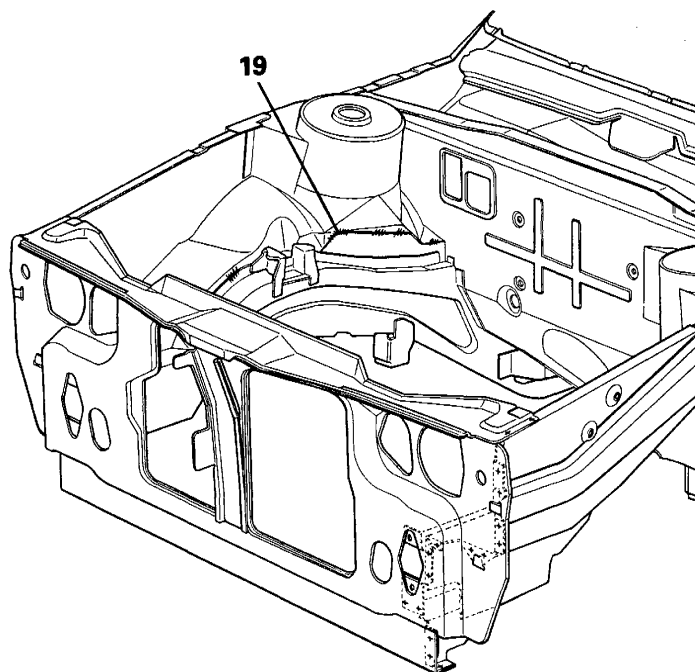
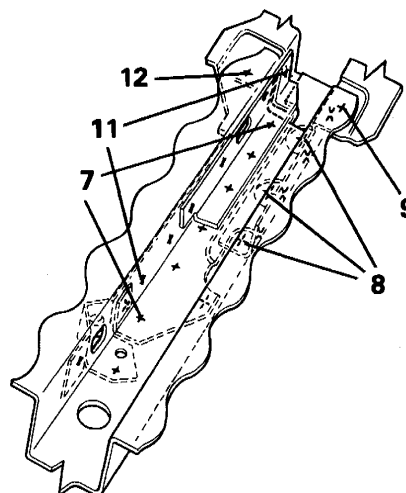
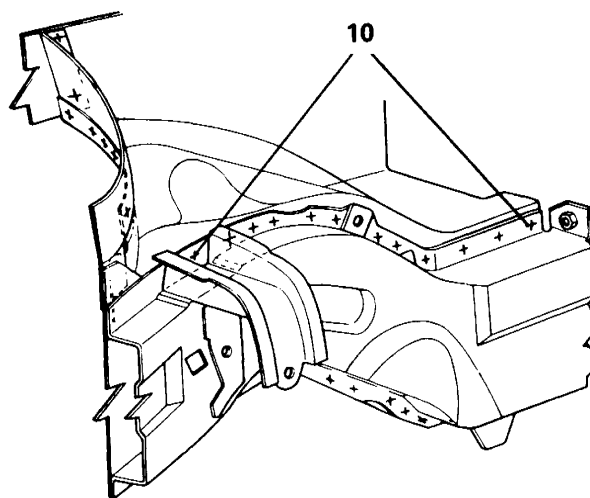
- Because the motor and transmission as well as the front suspension assembly all mount to the front side rails, it is extremely important that the alignment, as well as the workmanship, are perfect when doing repair or replacement work in this area.

REMOVAL

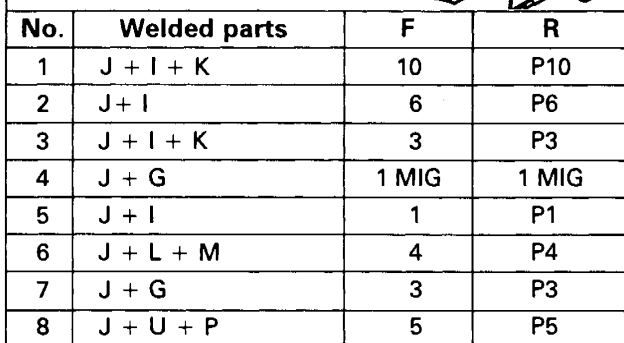
1. Cut the spot welds as cleanly as possible and then the braze welds should be ground apart.
2. Clean and prep all surfaces to be welded later.

INSTALLATION

1. Temporarily mount the front side rail and make sure all adjoining panels line up. Don't estimate, make perfect measurements.
2. Use a tool to place 5/16" holes in the front side rail at the same place the spot welds were located in the old rail.
3. Do the plug welding, do the MIG welding.



Treat all exposed metal with an appropriate metal conditioner or self-etching primer. Follow paint manufacturer's instructions for corrosion protection.

[illegible]

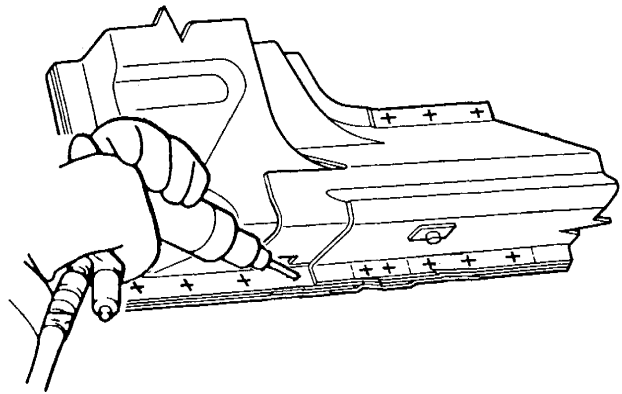


NOTES WITH REGARD TO REPAIR WORK

- The hinge pillar is another one of those important parts. It is directly responsible for strength of the body between the A pillar and the cowl and floor pan. Alignment is very important here as it is the panel the door is mounted on.

REMOVAL

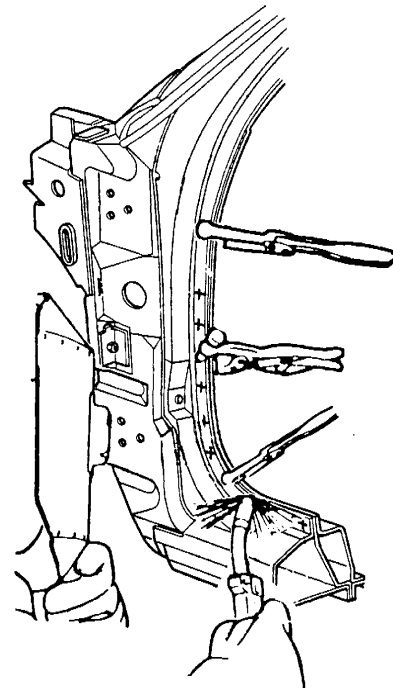
1. After you have removed the hinge pillar extension, cut the spot welds that are holding the front hinge pillar in place.
2. When cutting the welds at points 8 and 9 be sure to cut the welds as cleanly as possible. This will make your cleanup work much easier.



INSTALLATION

1. After fitting your new panel and cutting the new holes for the plug welds, double check to be sure of alignment.
2. Plug weld your new hinge pillar into place.

Treat all exposed metal with an appropriate metal conditioner or self-etching primer. Follow paint manufacturer's instructions for corrosion protection.



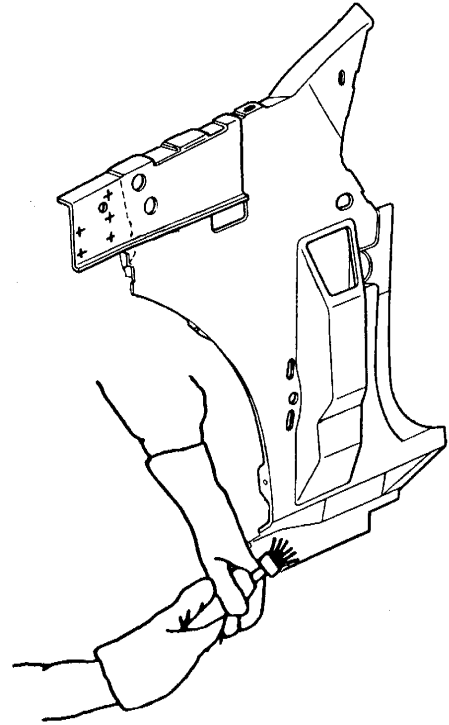


NOTES WITH REGARD TO REPAIR WORK

- The cowl side panel is one of the most difficult to replace because of the other panels that have to be removed before you can even get to it.

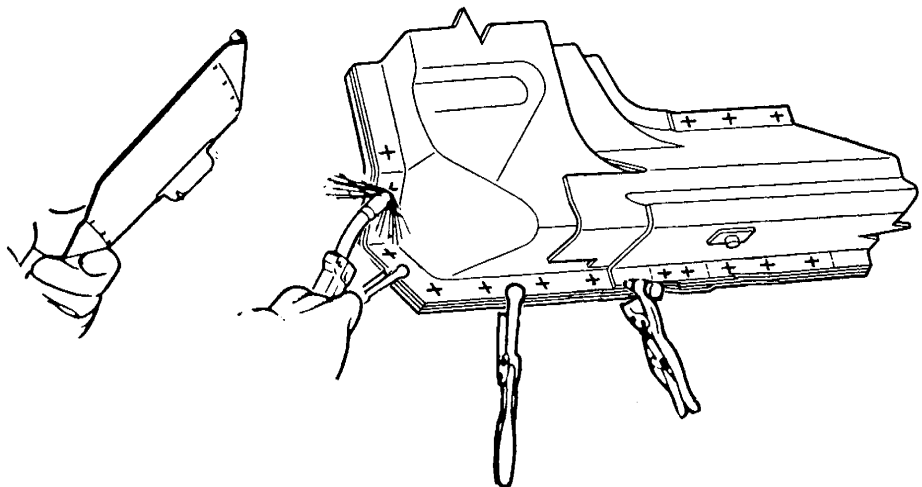
REMOVAL

1. We have already removed the front hinge pillar extension, the front side aperture and the front hinge pillar. Now cut the remaining spot welds holding the cowl side panel in position.
2. Take the cowl side panel off, prepare the surfaces for the new panel.

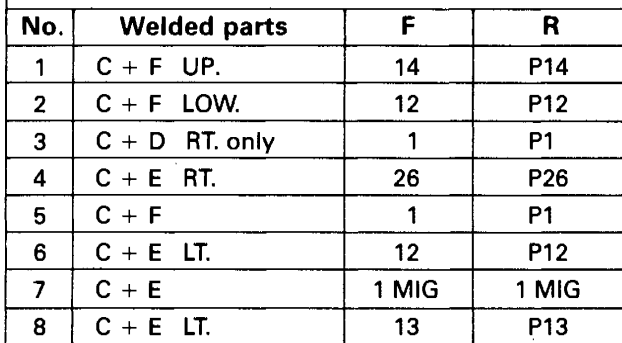


INSTALLATION

1. Check alignment with adjoining panels, double check alignment with adjoining panels.
2. Place your holes in the proper places so you can plug weld the cowl side panel into place.



Treat all exposed metal with an appropriate metal conditioner or self-etching primer. Follow paint manufacturer's instructions for corrosion protection.



This diagram shows an exploded view of a mechanical assembly, likely a hydraulic excavator arm. The components are numbered as follows:

- 1**: Upper boom section.
- 2**: Lower boom section.
- 3**: Hydraulic cylinder mounting bracket.
- 4**: Boom pin/bushing.
- 5**: Boom pin/bushing.
- 6**: Boom pin/bushing.
- 7**: Boom pin/bushing.
- 8**: Boom pin/bushing.
- 9**: Hydraulic cylinder mounting bracket.
- 10**: Boom pin/bushing.
- 11**: Boom pin/bushing.



NOTES WITH REGARD TO REPAIR WORK

- Follow the procedures outlined on page 14 for the welds connecting the headlamp support to the inner fender shield.

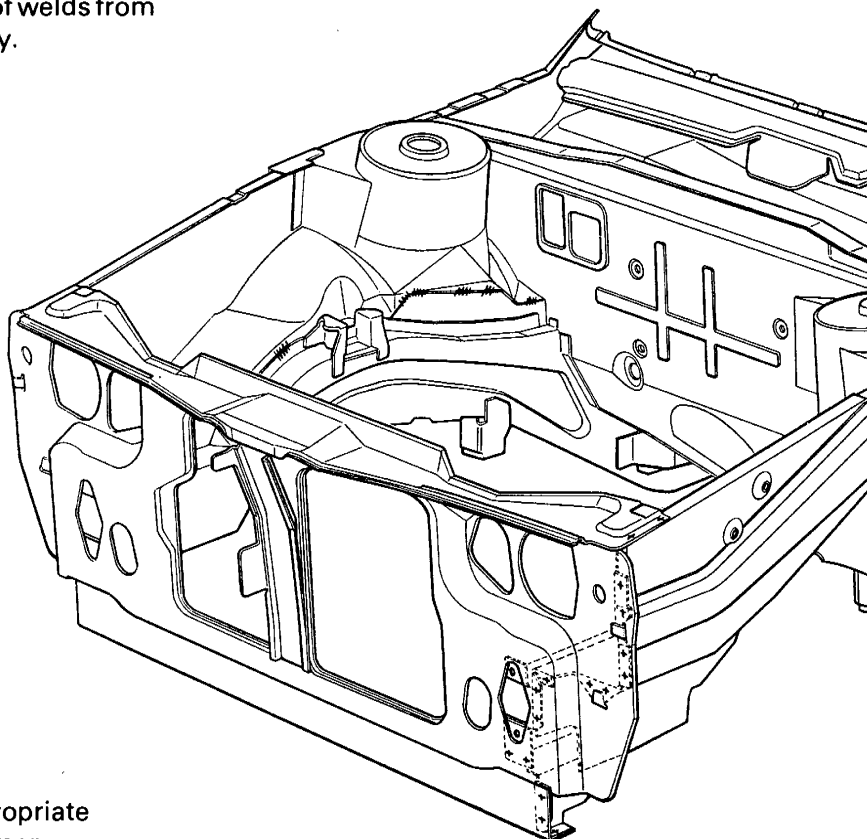
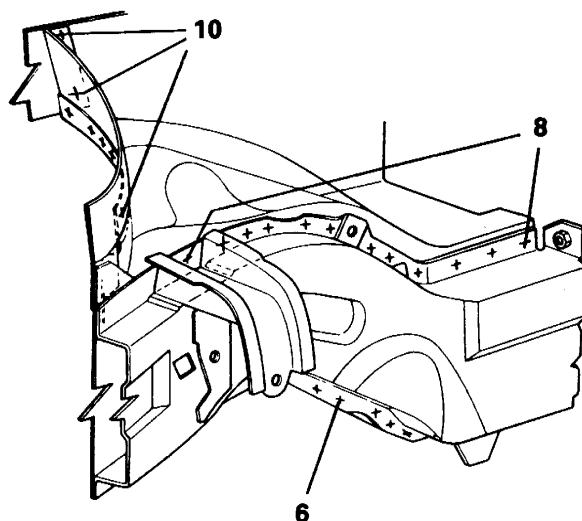
REMOVAL

1. When removing the spot welds from undamaged panels, if care is taken the undamaged panel can be reused, saving time and money.

INSTALLATION

1. Check and double check alignment with other panels.
2. Plug weld the panels into place.

Pay close attention to the number of welds from left to right in this area specifically.



Treat all exposed metal with an appropriate metal conditioner or self-etching primer. Follow paint manufacturer's instructions for corrosion protection.

Refer to
Headlamp Support (Part)

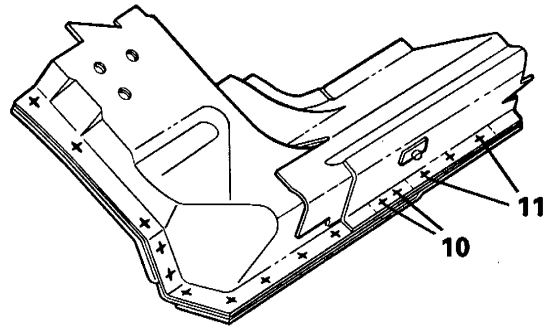


NOTES WITH REGARD TO REPAIR WORK

- Because the side aperture originally came as one full piece, when replacing the front you will have to section this piece.

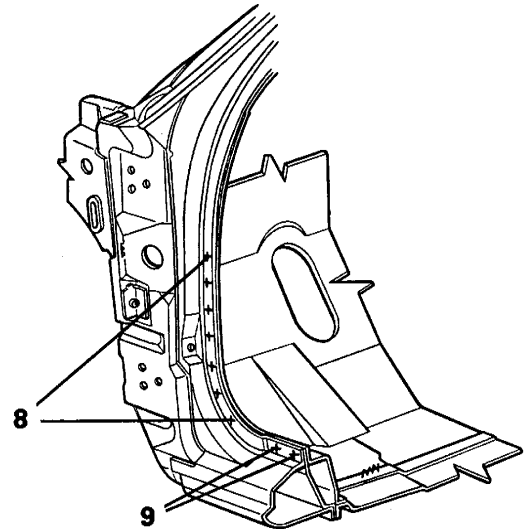
REMOVAL

1. First you have to decide where would be the best place to section the panel, then find a spot on both panels that you can use for measurement.
2. Make a rough cut on the old panel, cut all the spot welds and remove the old front side aperture.
3. Make a second measure (a more accurate one), now make the final cuts and do a good clean job.



INSTALLATION

1. Place the new front side aperture in place, making sure it lines up.
2. Plug weld the new panel into place, MIG weld the seams where the old panel and the new panel butt together.
3. Spray anti-corrosion agent onto the back side of the weld traces.



Treat all exposed metal with an appropriate metal conditioner or self-etching primer. Follow paint manufacturer's instructions for corrosion protection.

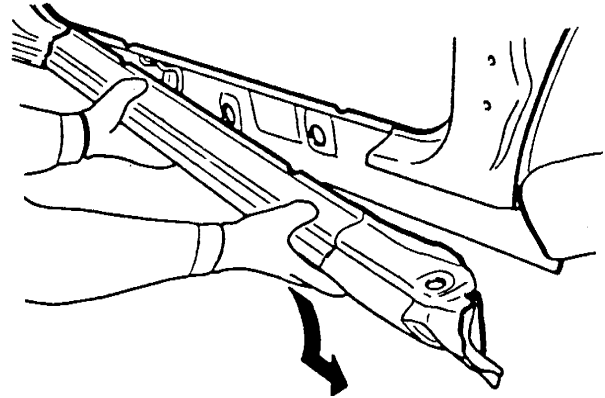


NOTES WITH REGARD TO REPAIR WORK

- If replacing only part of the panel, butt weld over solid structures such as sill reinforcements.

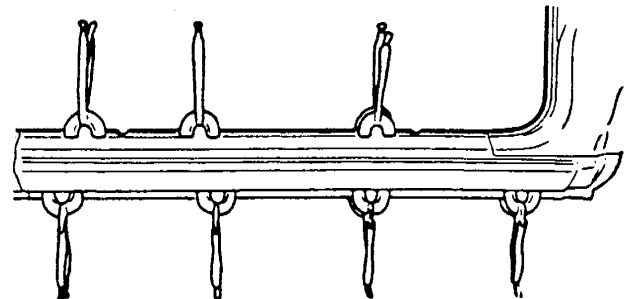
REMOVAL

1. Cut and separate the spot-welded location.
2. Make a clean rough cut and remove the outer panel.
3. Because the side sill is part of the side aperture, you will have to cut in the new side sill.

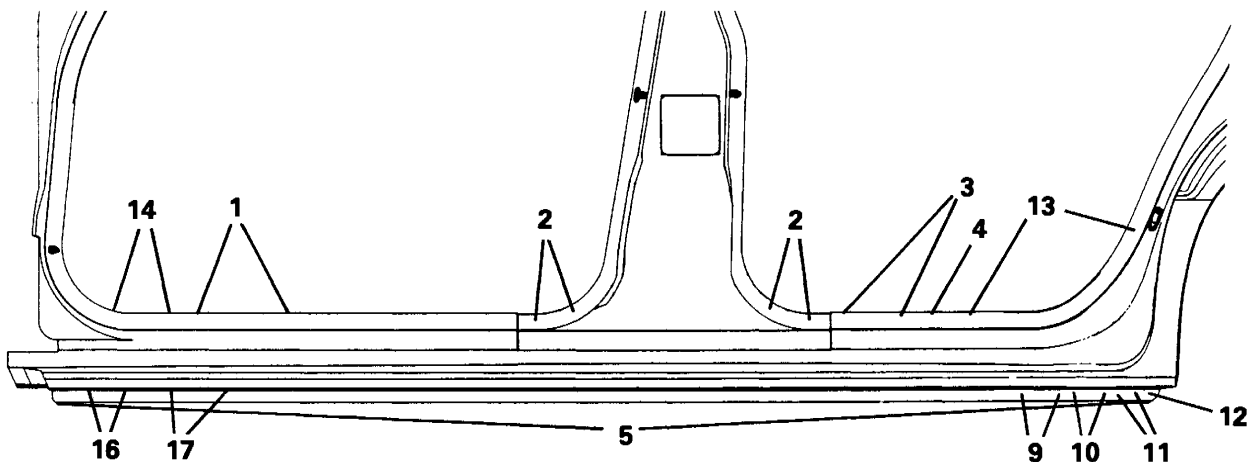


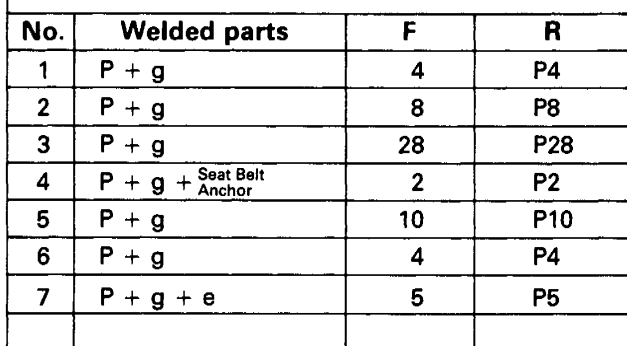
INSTALLATION

1. Temporarily mount the side sill outer panel over the old outer panel, and mark the two panels where they will splice the best.
2. Cut the panels so you can butt weld the new panel into place.
3. Plug weld the new panel where it was spot welded previously.



Treat all exposed metal with an appropriate metal conditioner or self-etching primer. Follow paint manufacturer's instructions for corrosion protection.



[illegible]



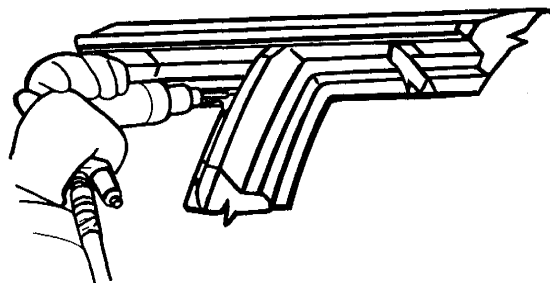
NOTES WITH REGARD TO REPAIR WORK

- For the outside pillar, drill 1-8" holes in the center of each spot weld as a guide for a 5/16 to 3/8 hole saw.

If the inner B pillar has to be replaced, it will have to be sectioned.

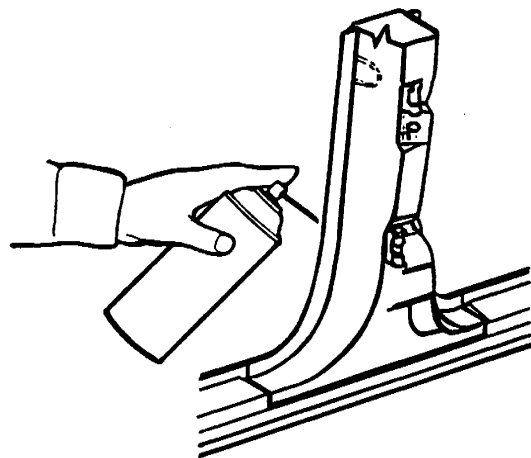
REMOVAL

1. After all the spot welds are cut, the center pillar will come right out.
2. Clean all mating surfaces to ensure a good fit of the new panel.

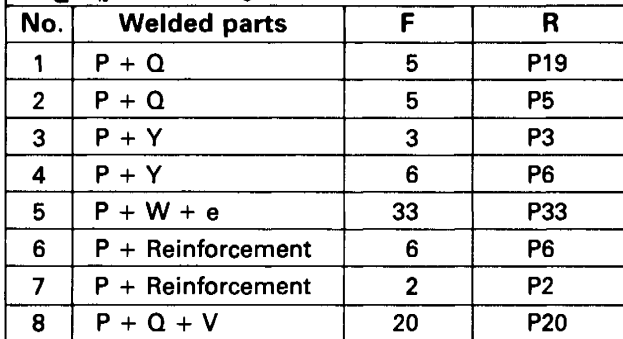
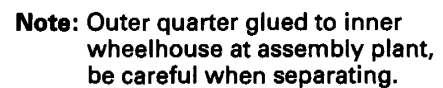


INSTALLATION

1. After placing holes in the new part for the plug welds, fit the part into position.
2. Plug weld the new center pillar into place.
3. Spray anti-corrosion agent onto the new welds and inner surfaces.



Treat all exposed metal with an appropriate metal conditioner or self-etching primer. Follow paint manufacturer's instructions for corrosion protection.

[illegible]

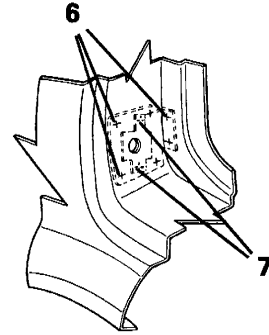


NOTES WITH REGARD TO REPAIR WORK

- For safety reasons, do the work with fuel tank removed.
- On vehicles equipped with a sun roof there are drain hoses running down the front and rear pillars. You may also encounter wiring harnesses in these pillars; be careful not to cut any of these materials.

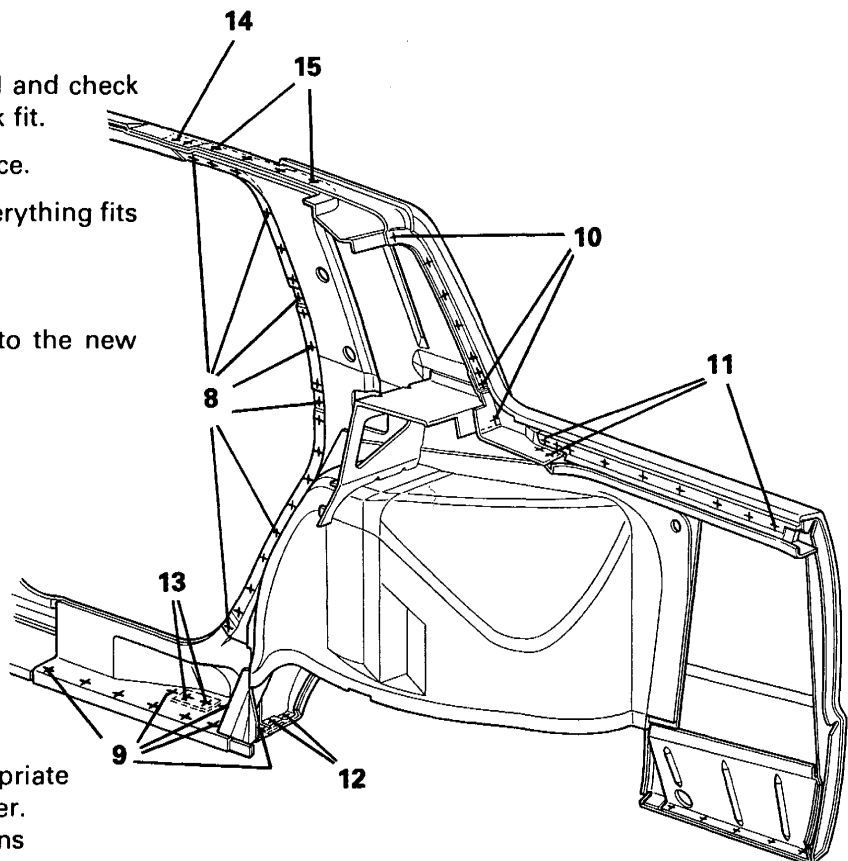
REMOVAL

1. After removal of all spot welds, you may have to use an air chisel to cut the old quarter away from the inner panels.
2. Because the quarter is glued at the wheel opening to the outer wheelhouse you will have to be very careful not to damage the good panels.
3. Clean all adjoining panels and prep them for placement of the new quarter panel.

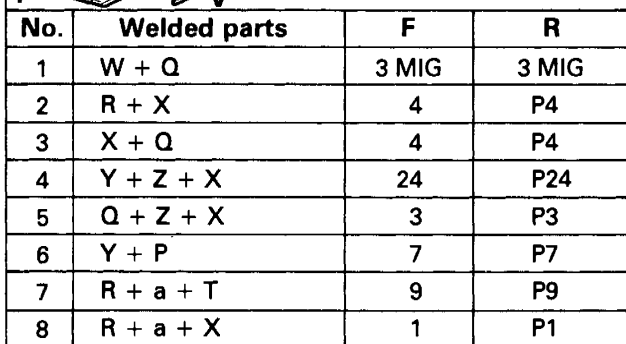


INSTALLATION

1. Mount the new outer quarter panel and check the door fit as well as the rear deck fit.
2. Tack weld the new quarter into place.
3. Check the fit again to make sure everything fits perfectly.
4. Weld the quarter into place.
5. Spray anti-corrosion protection onto the new welds from inside.



Treat all exposed metal with an appropriate metal conditioner or self-etching primer. Follow paint manufacturer's instructions for corrosion protection.



This technical diagram illustrates the assembly of a car body, showing the relationship between various components. The numbered callouts are as follows:

- 1: Detail of a fastener or clip.
- 2: Front floor pan.
- 3: Front side sills.
- 4: Front cross member.
- 5: Front wheel arch trim.
- 6: Front fender.
- 7: Front wheel arch reinforcement.
- 8: Front wheel arch trim (inner).
- 9: Front wheel arch reinforcement (inner).
- 10: Front wheel arch trim (outer).
- 11: Front cross member (lower).
- 12: Rear cross member.
- 13: Rear side sills.
- 14: Rear cross member (upper).
- 15: Rear wheel arch trim.
- 16: Rear wheel arch reinforcement.
- 17: Rear wheel arch trim (inner).
- 18: Rear wheel arch reinforcement (inner).
- 19: Rear wheel arch trim (outer).



NOTES WITH REGARD TO REPAIR WORK

- For safety reasons, do the work with the fuel tank removed.
- When the rear end panel is being mounted on the vehicle it has to be fitted into one side and then worked into the other.

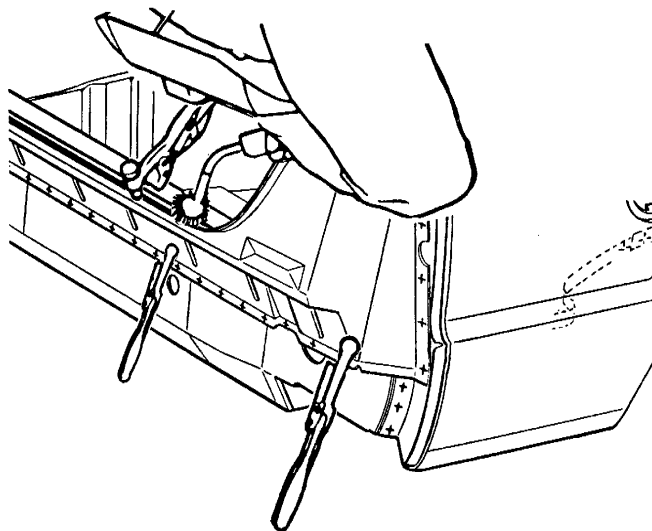
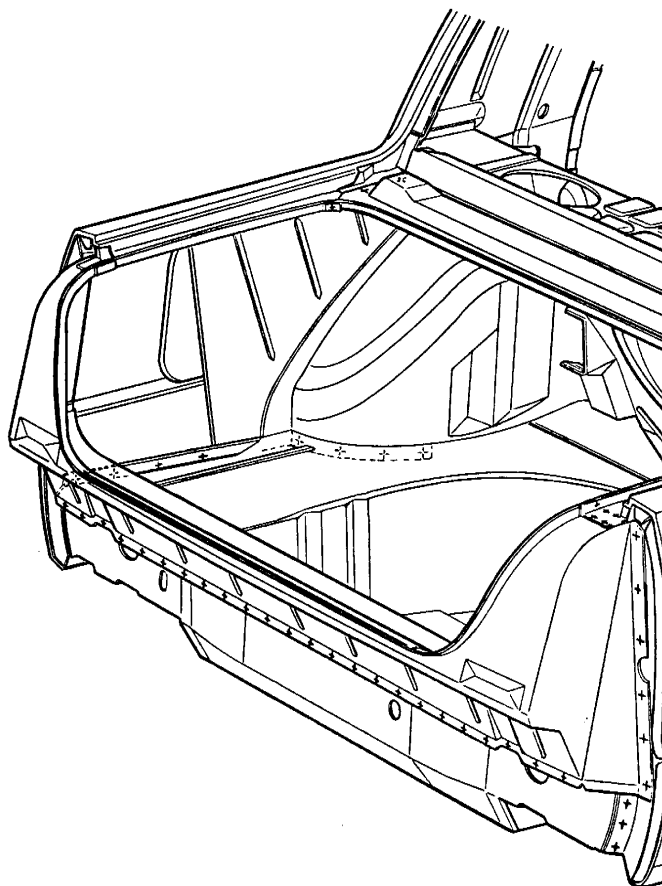
REMOVAL

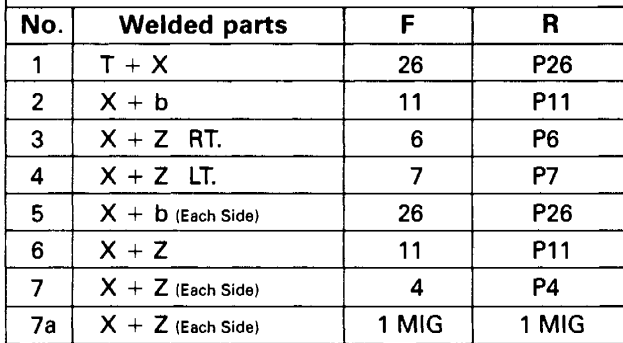
1. Cut the spot welds with a hole saw.
2. You may want to cut the tail panel into two pieces to make it easier to remove.
3. Clean and prep all the panels to which you will be fitting the new tail panel.

INSTALLATION

1. It may take a little extra time to fit the new panel for a good fit.
2. Tack weld the new panel into place.
3. Plug weld the panel for a permanent repair.

Treat all exposed metal with an appropriate metal conditioner or self-etching primer. Follow paint manufacturer's instructions for corrosion protection.





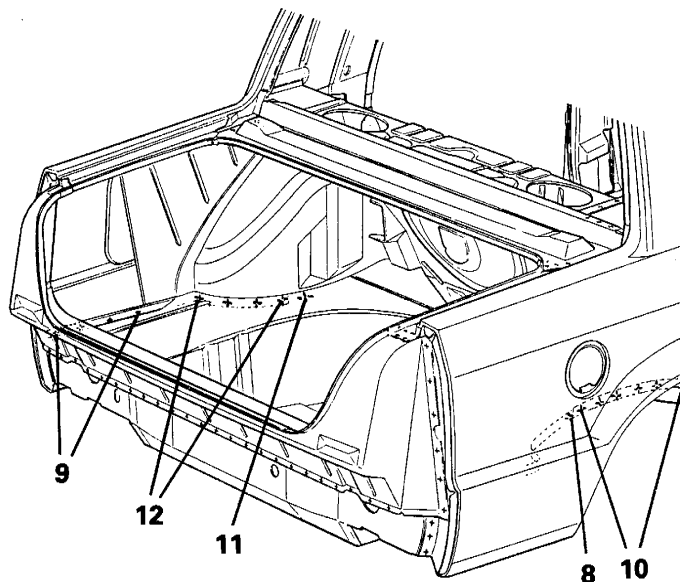


NOTES WITH REGARD TO REPAIR WORK

- The fuel tank must be removed to make this repair.
- The repair procedures are the same for both models.

REMOVAL

1. Remove the tail panel as previously discussed.
2. Make a rough cut of the floor pan; it will make the removal easier.
3. Cut and separate the spot welds using a 5/16-3/8 hole saw. Using this technique will give you a templet with which to mark spot-weld locations on the new panel.

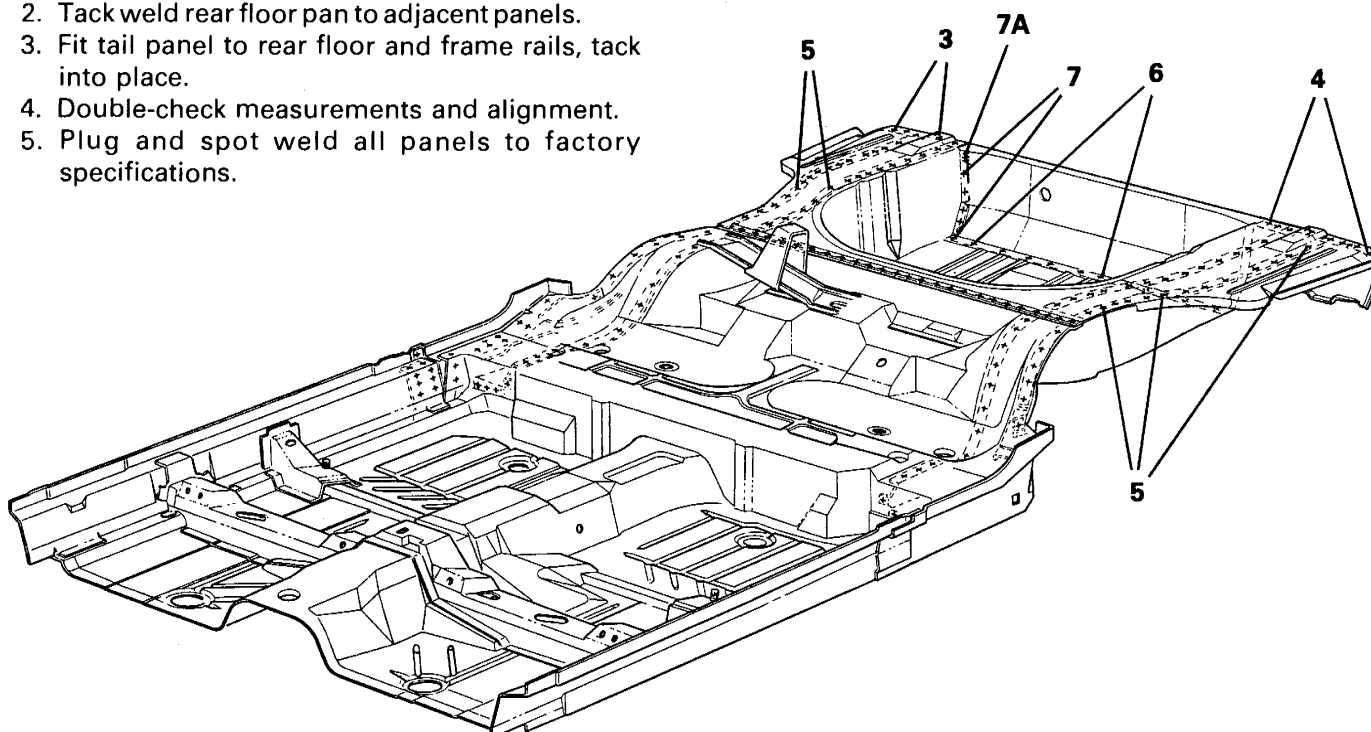


PREPARATION

1. Use old rear floor pan as a guide if possible to ready new pan for installation.
2. Prep all adjacent panels so the new rear tail panel will fall into place.

INSTALLATION

1. Place new rear floor pan into rear cavity and fit to adjacent panels.
2. Tack weld rear floor pan to adjacent panels.
3. Fit tail panel to rear floor and frame rails, tack into place.
4. Double-check measurements and alignment.
5. Plug and spot weld all panels to factory specifications.



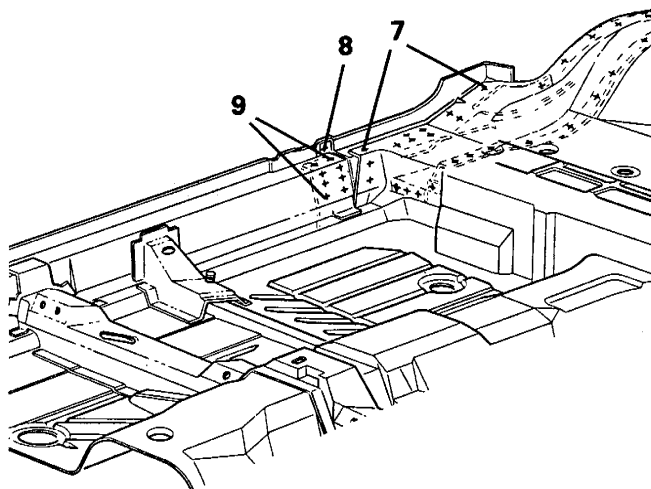


NOTES WITH REGARD TO REPAIR WORK

- Don't forget to protect the job against fire or other unnecessary damage.
- Because of the difficulty in the removal of these parts, take special care not to damage any adjacent parts.

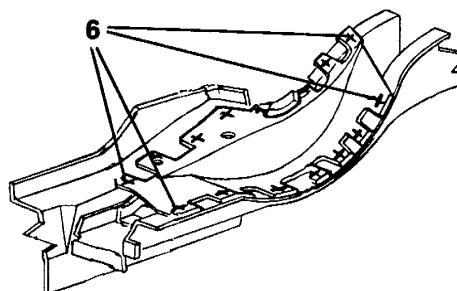
REMOVAL

1. Drill 1/8 hole in the center of each spot weld to be used as a guide.
2. Use a 5/16-3/8 hole saw to cut all spot welds.
3. Use an air chisel to remove side rail.
Note: Do not damage any other panels during removal process.



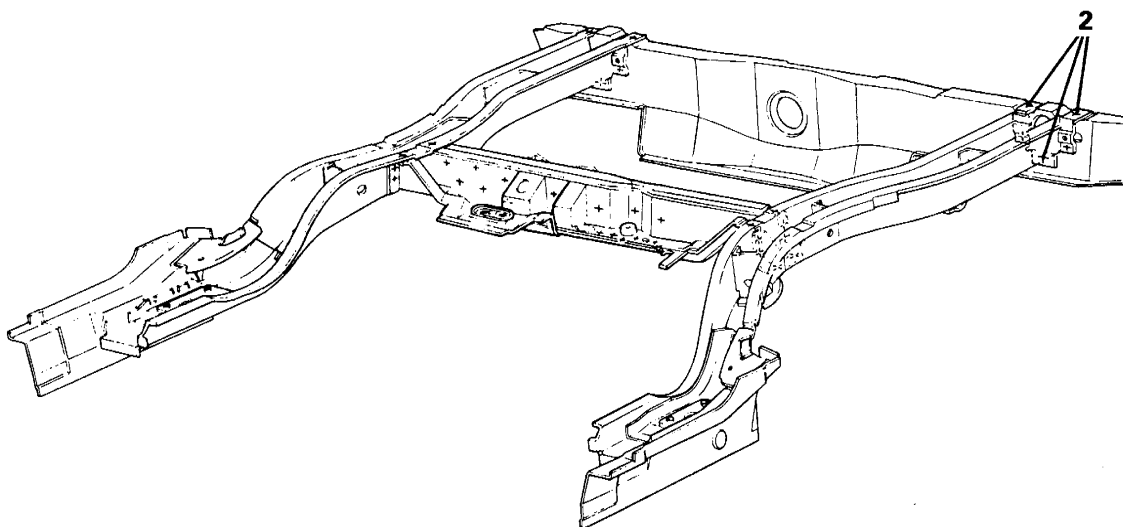
PREPARATION

1. Repair any damage that may have been caused by removal of the side rail.
2. Use old side rail as a guide for plug weld placement.



INSTALLATION

1. Temporarily mount the new rear side rail to the body.
2. Measure each part and make corrections necessary to obtain perfect agreement with the other parts involved.
3. Plug weld the new side member, making sure it is at least as strong as original.



Treat all exposed metal with an appropriate metal conditioner or self-etching primer. Follow paint manufacturer's instructions for corrosion protection.

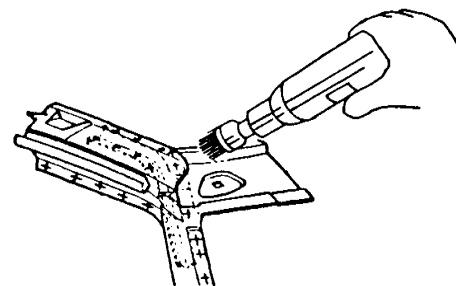
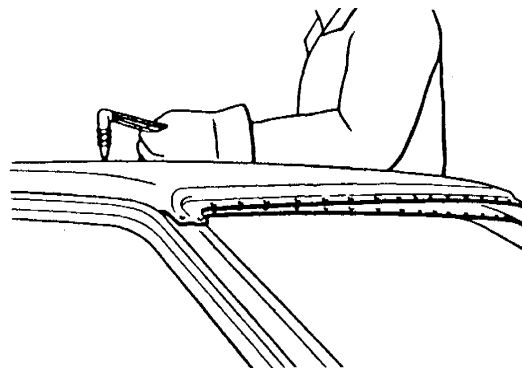


NOTES WITH REGARD TO REPAIR WORK

- Take care when handling a roof panel. The panels are sometimes damaged as much by an aggressive technician as by a collision.
- Make sure to use a good recommended adhesive for the roof bows.

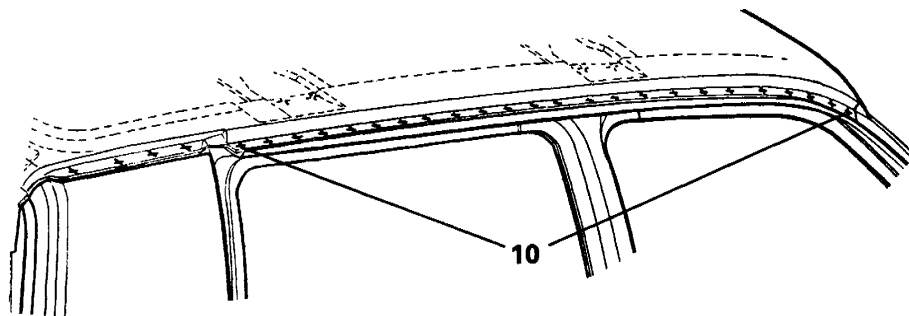
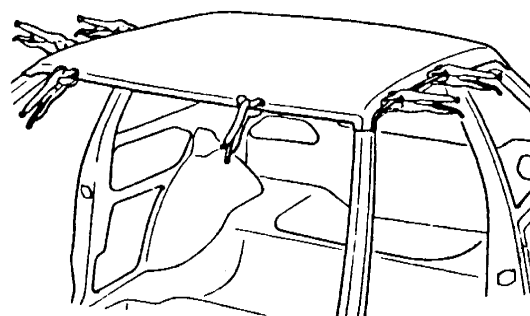
REMOVAL

1. Cut and separate the spot-welded and brazed locations, being careful not to damage any other panels.
2. Heat the top of the roof panel at the areas where it has adhesives applied. It will make it easier to remove.
3. Remove the roof panel.
4. Remove any old adhesive on roof braces, using a mule skinner's wire brush or something as aggressive.



INSTALLATION

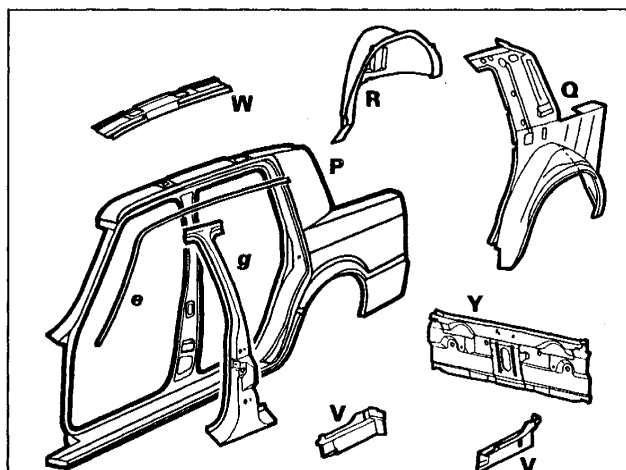
1. Temporarily mount the new roof panel onto the body and mark the location where it is going to be mounted.
2. Use the old roof panel as a templet to mark locations for plug welds on the new roof panel.
3. Apply the adhesive to the roof bows and place roof panel into position as marked previously.
4. After a double check for alignment, clamp panel down.
5. Plug weld the roof into place.
6. Put the MIG welds at locations showing in the welding charts.



Treat all exposed metal with an appropriate metal conditioner or self-etching primer. Follow paint manufacturer's instructions for corrosion protection.

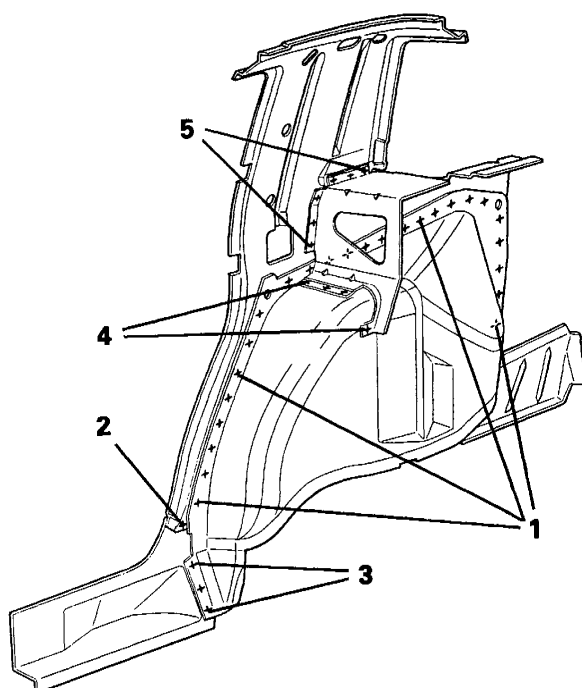
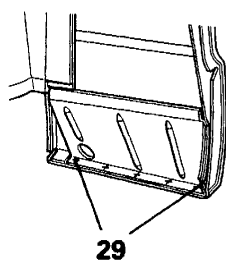


Quarter Panel, Inner



No.	Welded parts	F	R
1	Q + R RT.	25	P25
1	Q + R LT.	21	P21
2	R + V	1	P1
3	R + V	3	P3
4	R + Bracket	4	P4
5	Q + Bracket	6	P6
6	P + Q + W	2	P2
7	P + Q	15	P15

No.	Welded parts	F	R
8	P + Q + Aperture Panel Rein.	2	P2
9	P + Q + V	1	P1
10	P + Q + V	9	P9
11	V + Jacking Reinforcement + P	2	P2
12	P + Q + W	2	P2
13	P + Q	4	P4
14	Q + R	1	P1
15	P + Q	2	P2
16	P + Q	4	P4
17	P + Q + Aperture Panel	1	P1
18	P + Q	1	P1
19	P + Q	1	P1
20	P + Aperture Panel Rein.	1	P1
21	P + Q + Aperture Panel	1	P1
22	P + Q	7	P7
23	P + W	1	P1
24	P + W	12	P12
25	P + Q	5	P19
26	P + Y	9	P9
27	P + Q	3	P3
28	P + Aperture Panel Rein.	2	P2
29	P + Q	5	P5





NOTES WITH REGARD TO REPAIR WORK

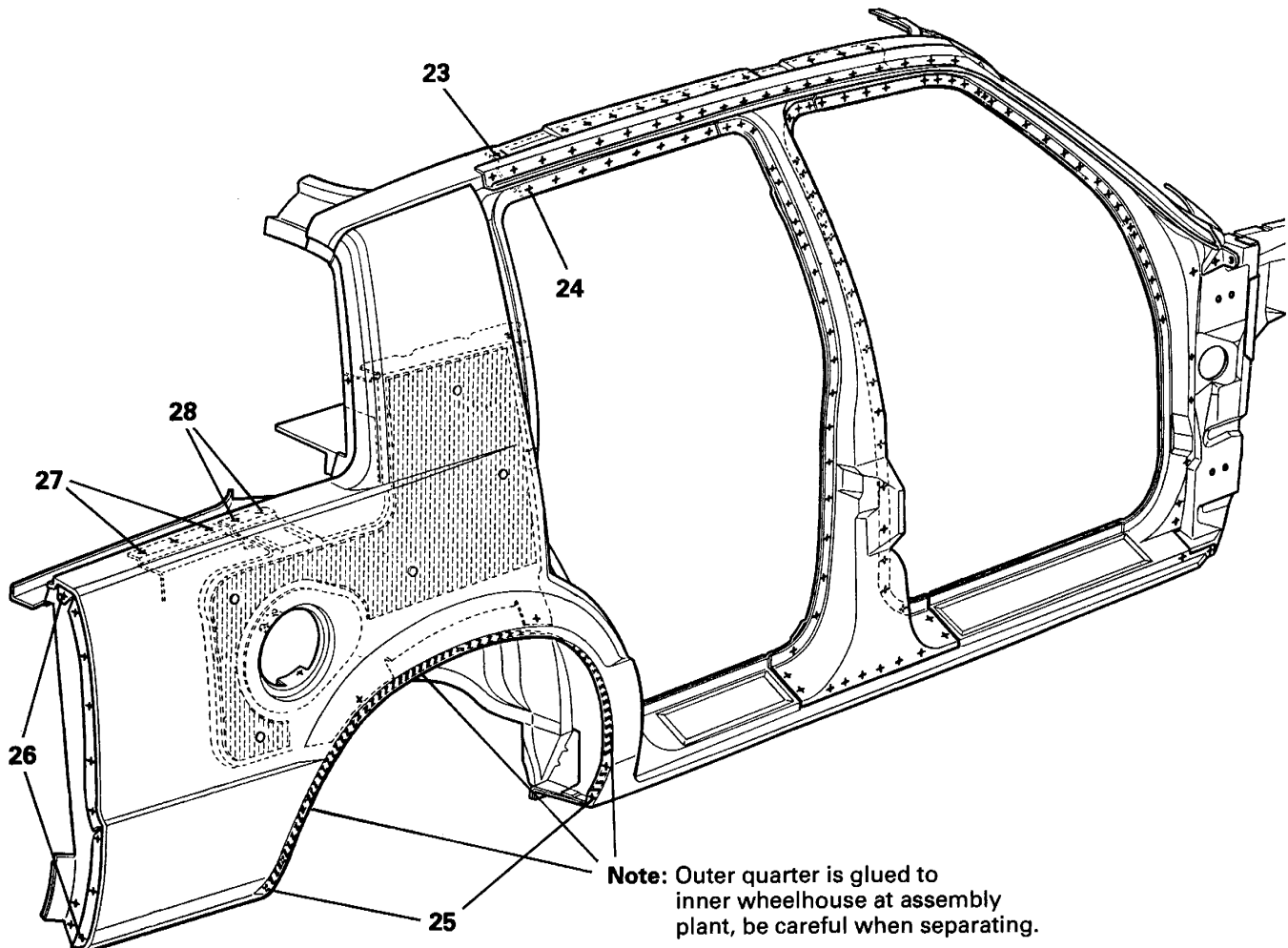
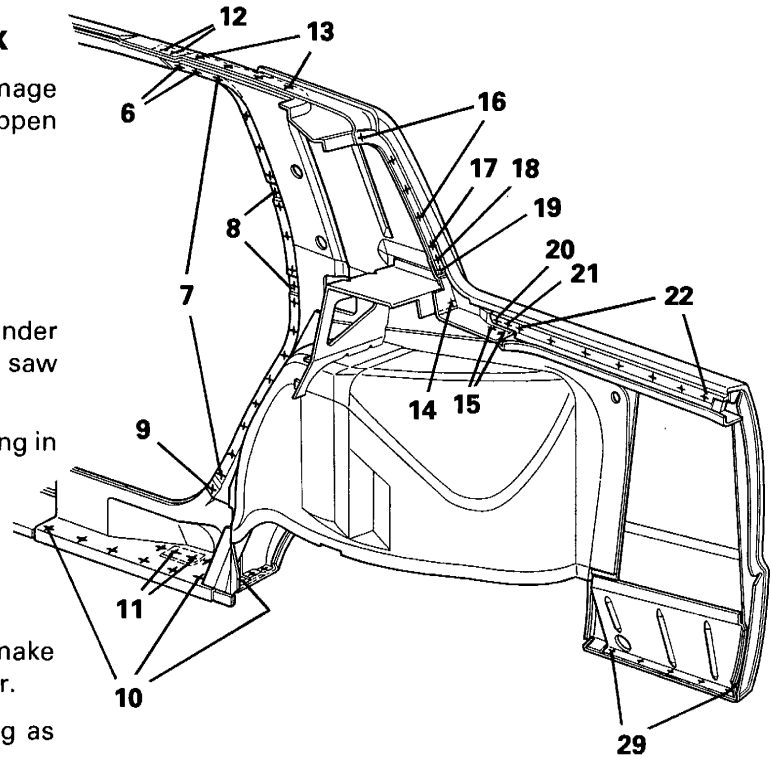
- Always protect yourself against fire, eye damage and any of the other accidents that could happen if you are not careful.

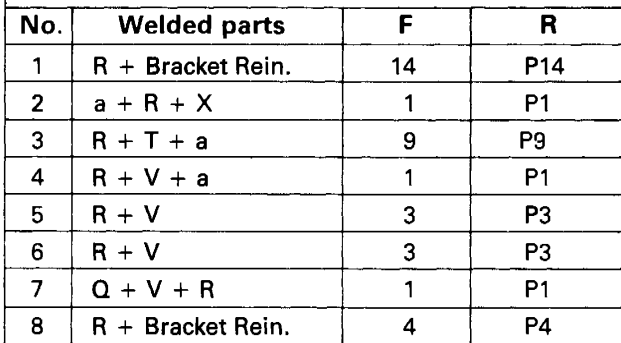
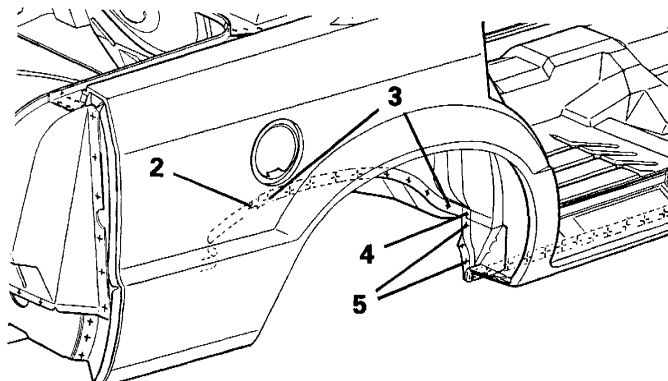
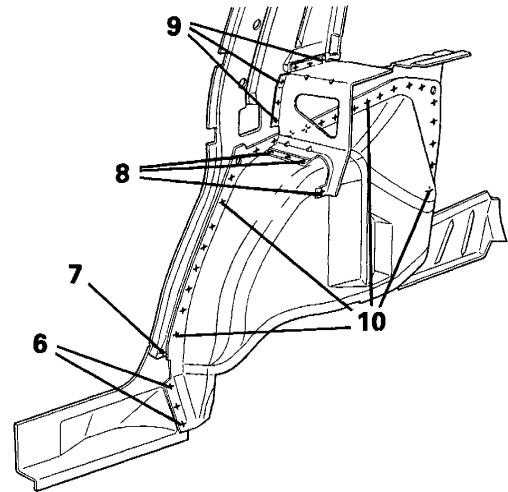
REMOVAL

1. Use the hole saw for spot welds, the die grinder for hard to get at spots and a pneumatic saw where needed.
2. Don't cause yourself any extra work by being in a hurry.

INSTALLATION

1. When replacing the inner quarter panel, make sure of alignment before welding together.
2. Make sure the welds are at least as strong as original.



[illegible]



NOTES WITH REGARD TO REPAIR WORK

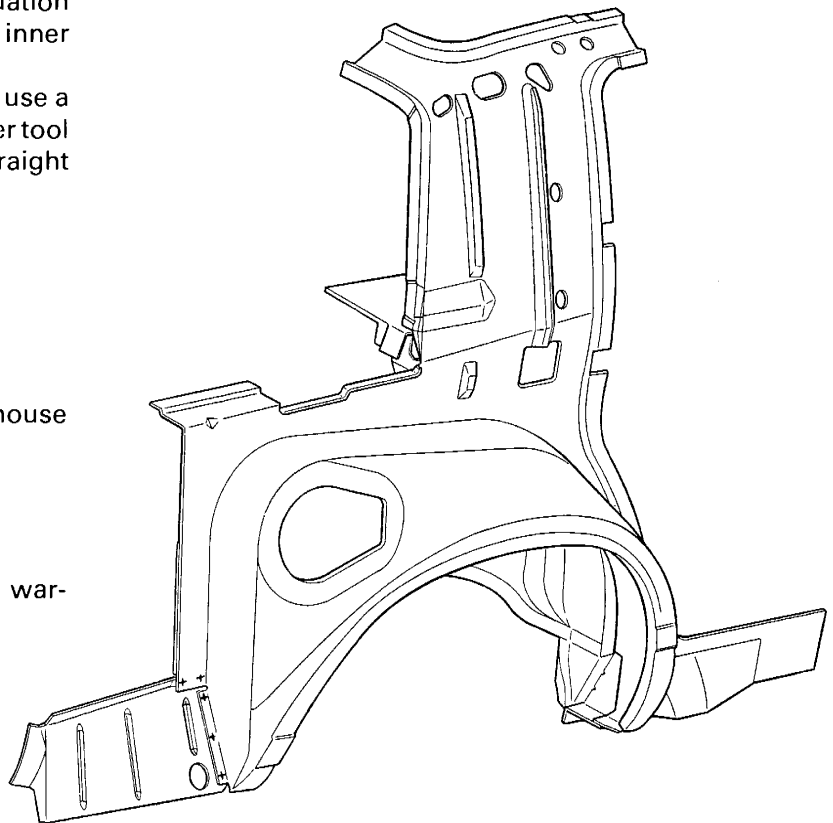
- The inner wheelhouse panel is welded with spot welds at the seam where it mounts to the outer wheelhouse. There are so many spot welds here it is comparable to a seam weld.
- Take plenty of time cutting the wheelhouse away from other panels, don't do any more damage.

REMOVAL

1. Because there is a lack of room in this situation you may consider rough cutting the old inner wheelhouse out first.
2. After you have gained a little more room, use a die grinder, air chisel, hole saw or any other tool you may have to achieve a good, clean, straight surface to mount your new panel to.

INSTALLATION

1. Temporarily mount the new inner wheelhouse (take your time). This will be difficult.
2. Do your plug welding, MIG welding.
3. Use a good seam sealer.
4. Take care to protect the corporation rust warranty during any repair job.



Treat all exposed metal with an appropriate metal conditioner or self-etching primer. Follow paint manufacturer's instructions for corrosion protection.

C BODY STRUCTURAL ADHESIVES

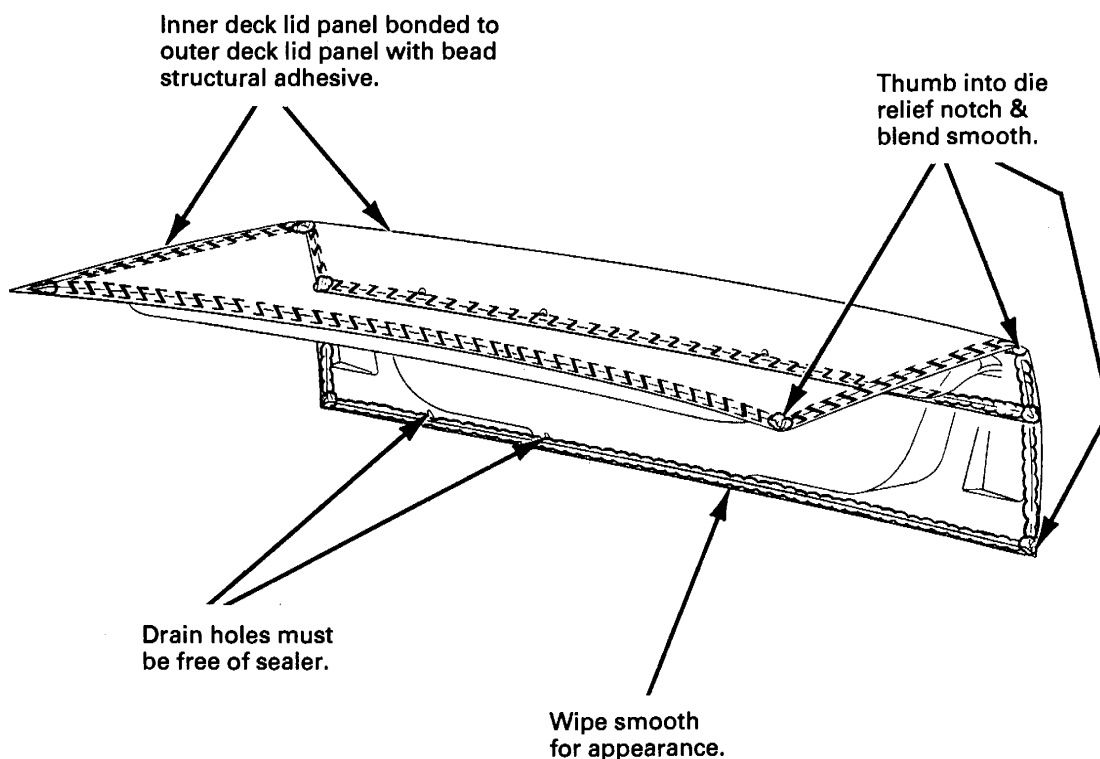


Replacing a door skin used to be a time consuming repair with a variety of tools and equipment needed to perform the repair. Now with the aid of structural adhesive there is an alternative repair for door skin replacement. There are many benefits for using structural adhesive.

For example:

- No welding required
- Added strength
- Reduces door flange distortion

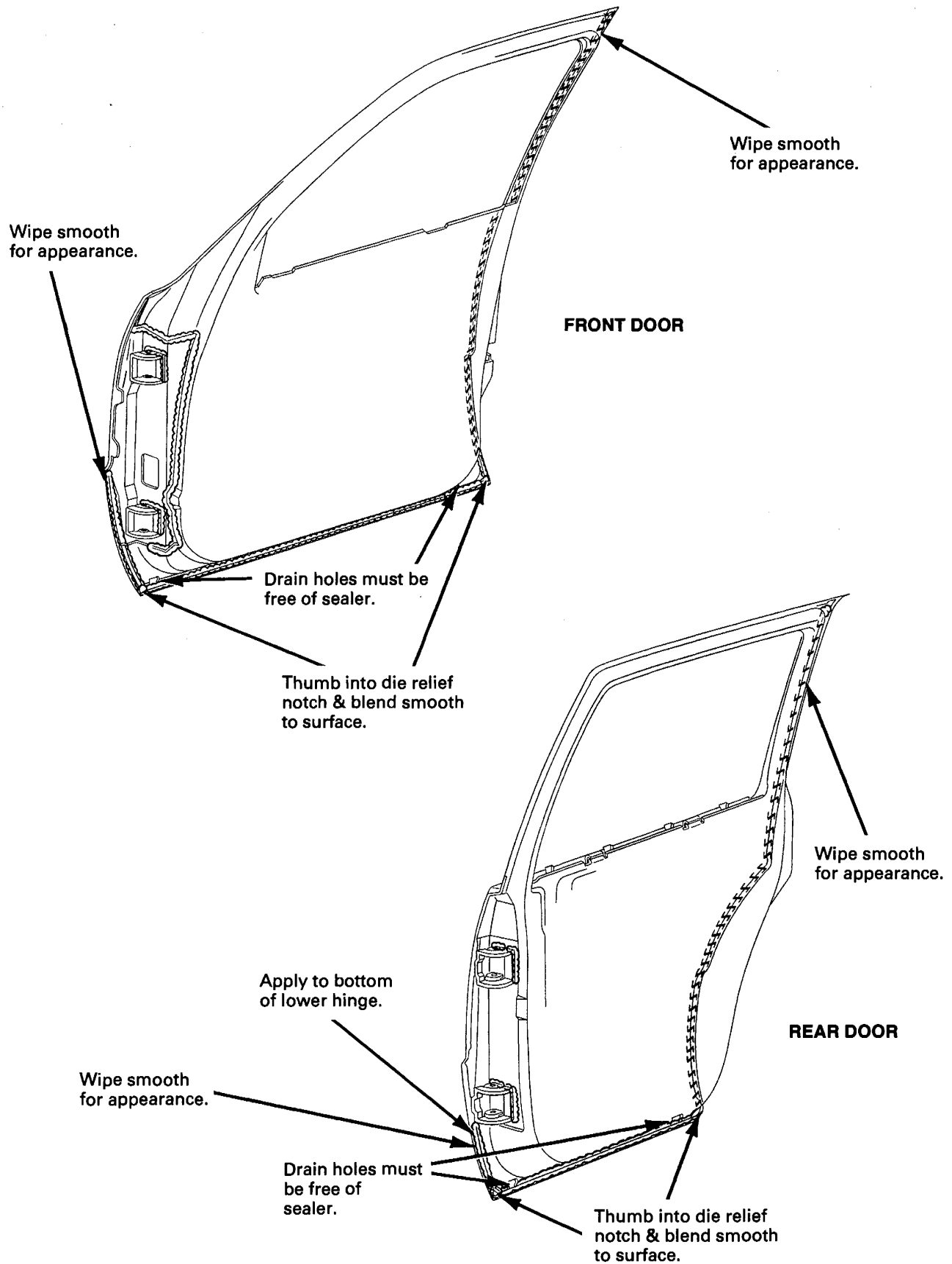
DECK LID



Reminder — Structural adhesive is only used as a cosmetic repair.



Structural Adhesives



C BODY

BODY SEALING LOCATIONS

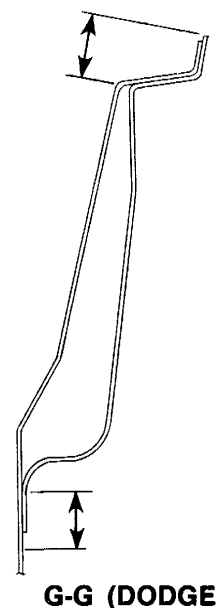
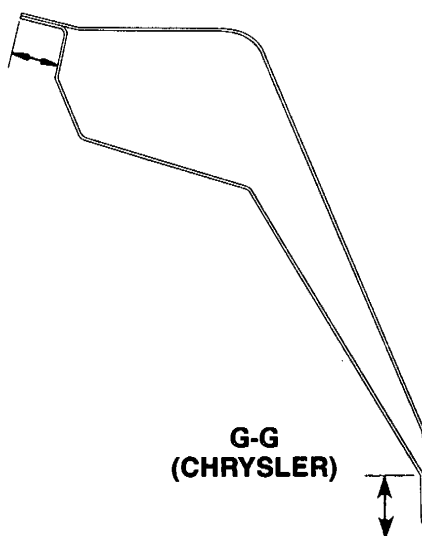
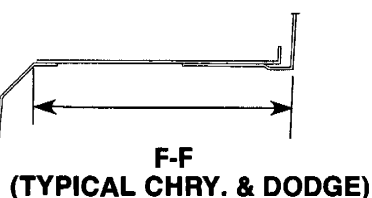
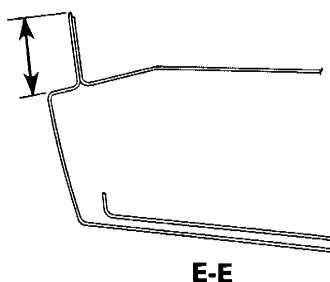
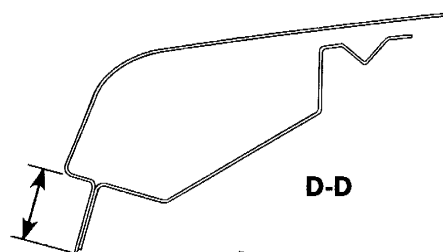
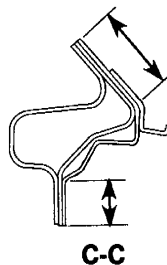
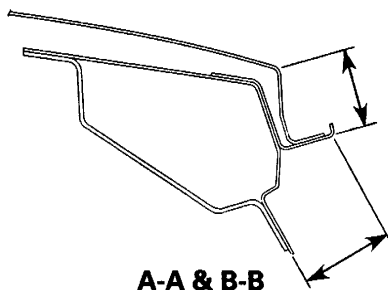
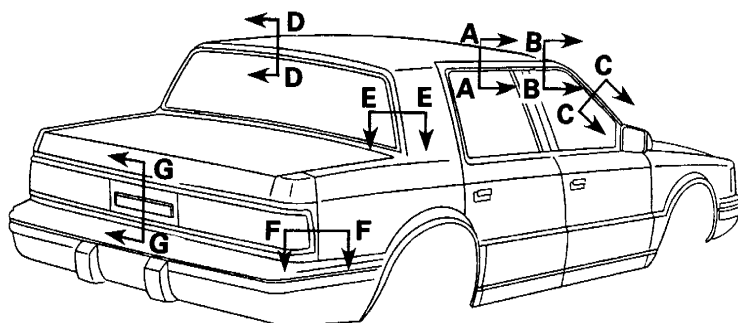


All repairs where panels were replaced have voids that must be filled with sealant. Sealant should be applied to all skips, pin holes in sealers and weld burn through holes on the interior and exterior of the vehicle that would permit leakage of water, air or exhaust fumes.

Typical areas of the exterior that must be repaired are listed on this page. Typical areas of the interior that must be repaired are floor pans, wheelhouses, dash panel and cowl sides.

AREAS AFFECTED

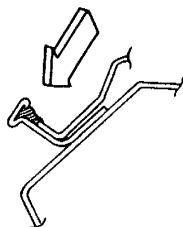
- A —
- B —
- C —
- D —
- E —
- F —
- G —



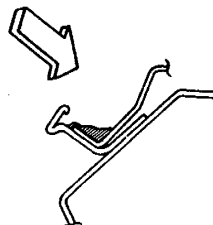


Body Sealing Locations

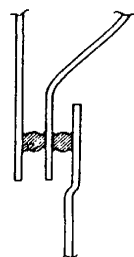
METHODS OF APPLYING AUTO BODY SEALANT



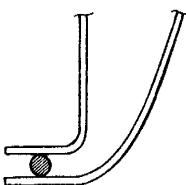
Hold gun nozzle in direction of arrow in order to effectively seal metal joints.



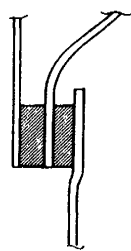
Do not hold gun nozzle in direction of arrow. Sealer applied as shown is ineffective.



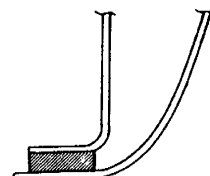
3 metal thickness



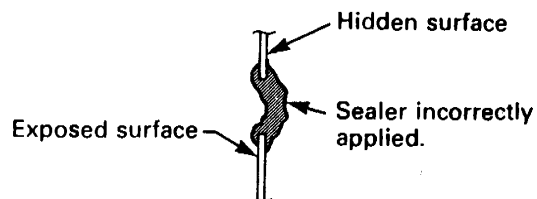
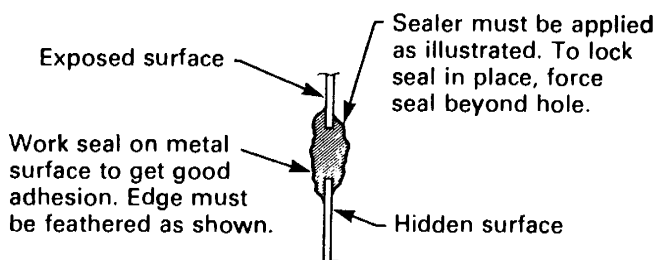
2 metal thickness



3 metal thickness



2 metal thickness



Symbols



Extrudable thermoplastic



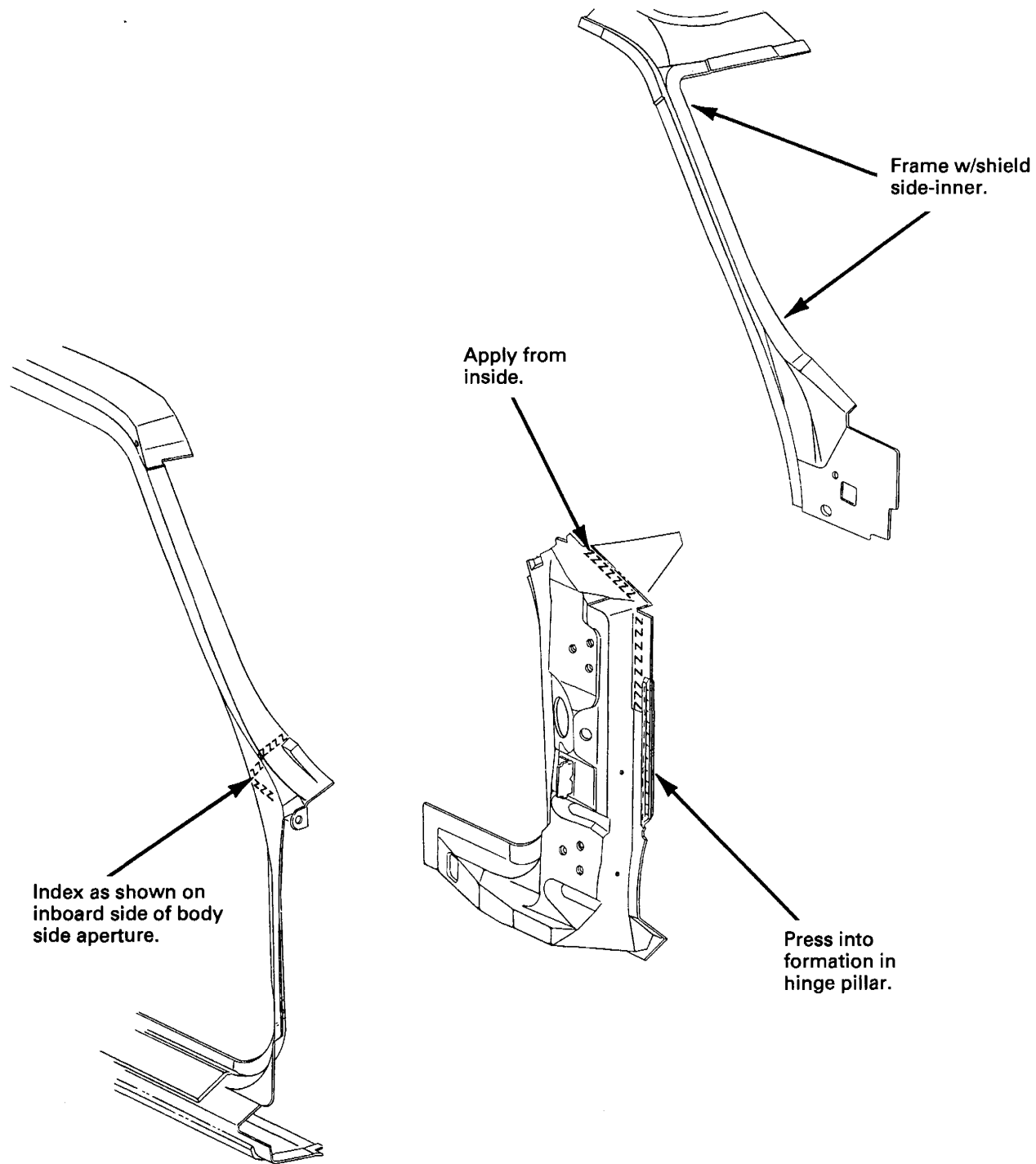
Exposed sealant



Hidden sealant



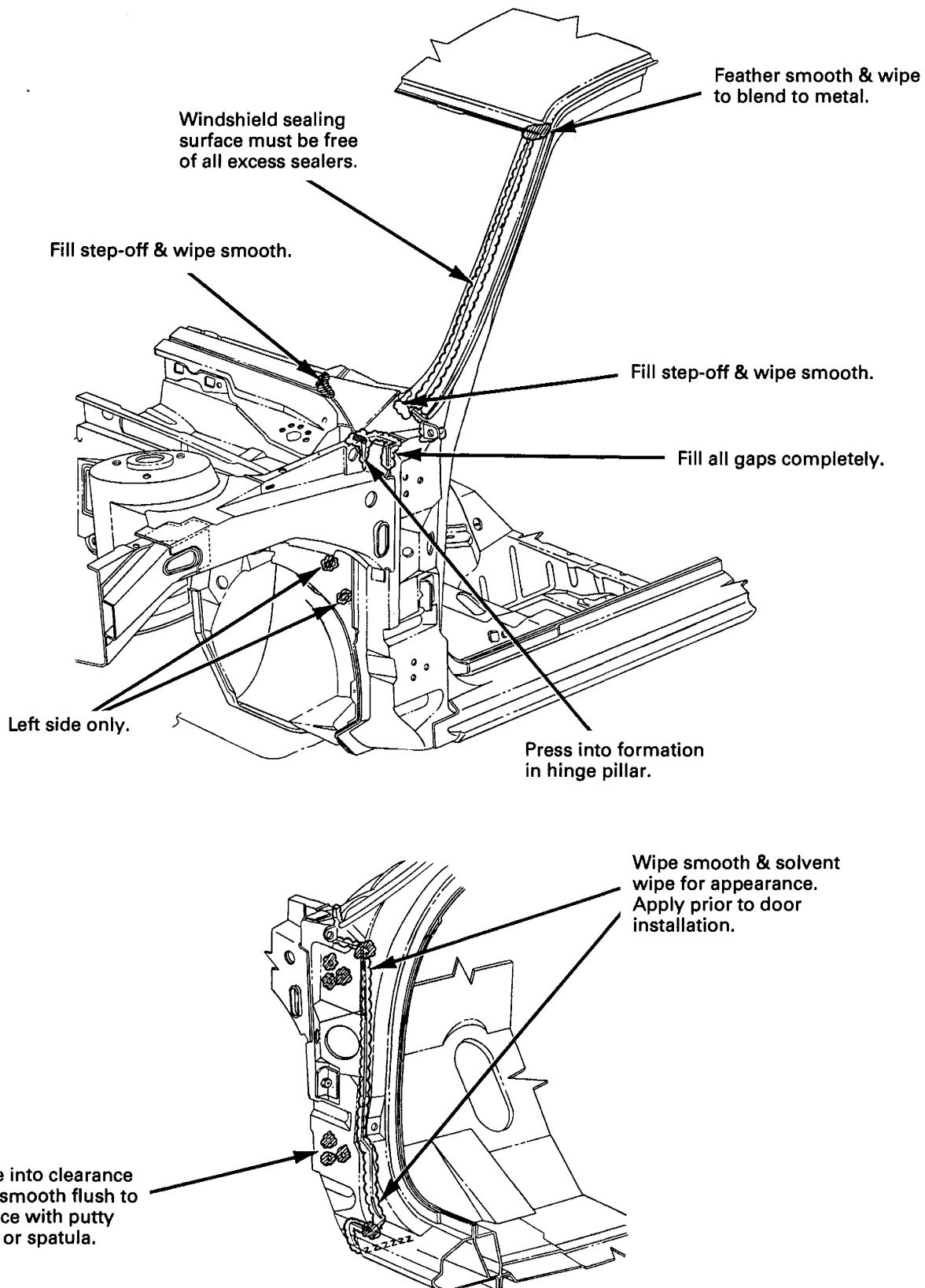
FRONT PILLAR AREA





Body Sealing Locations

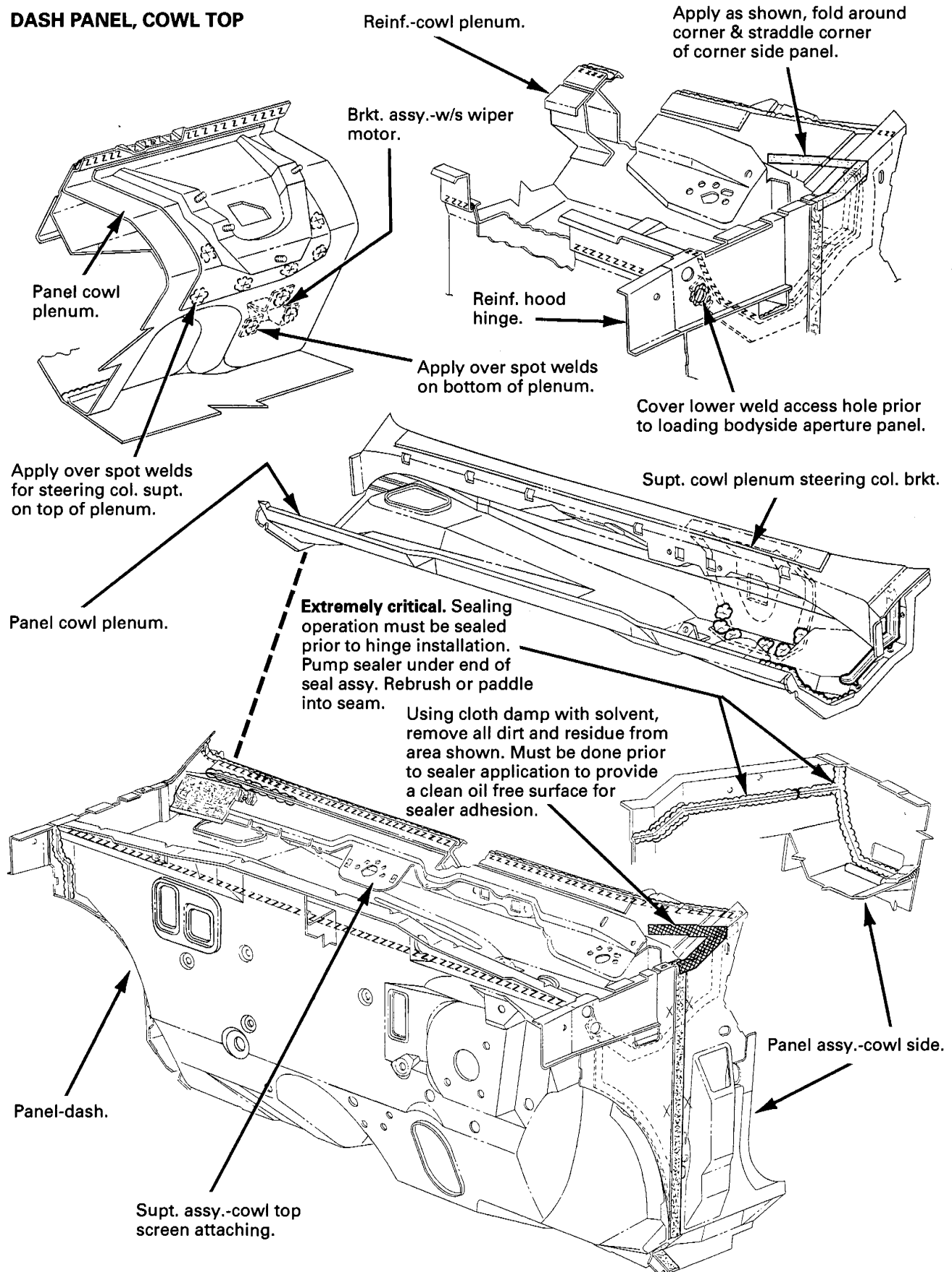
FRONT PILLAR AREA



Body Sealing Locations



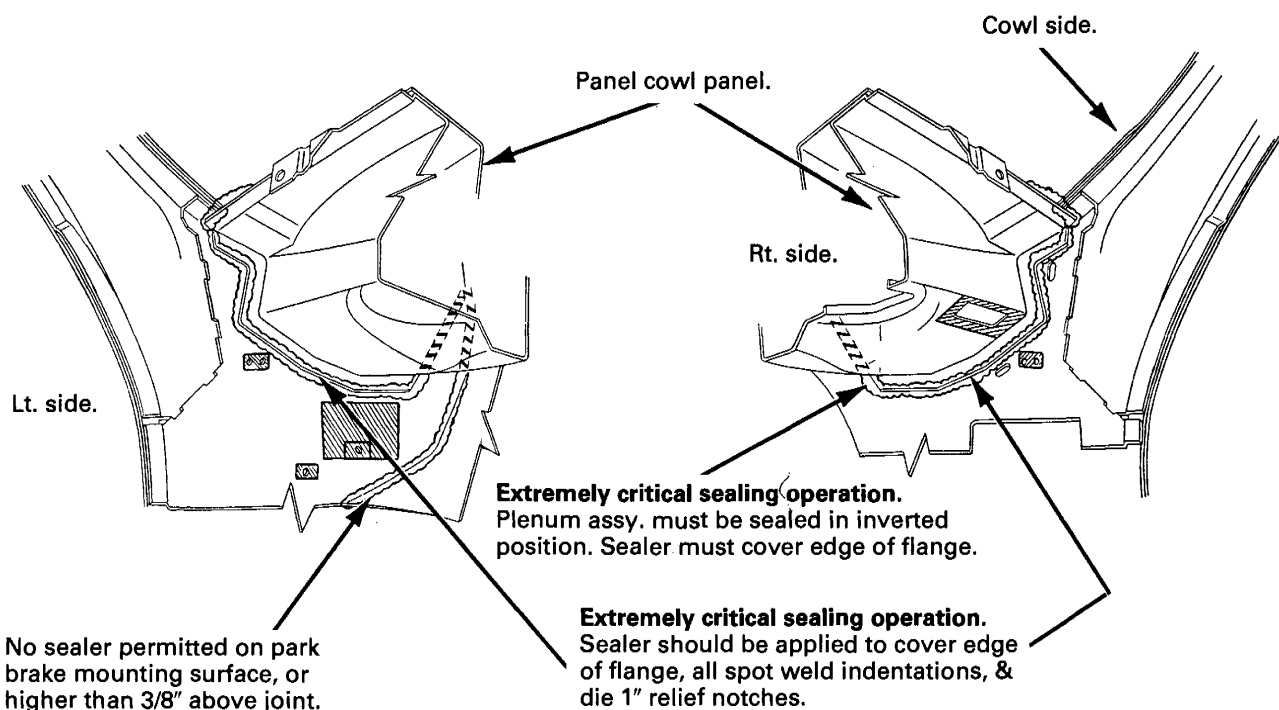
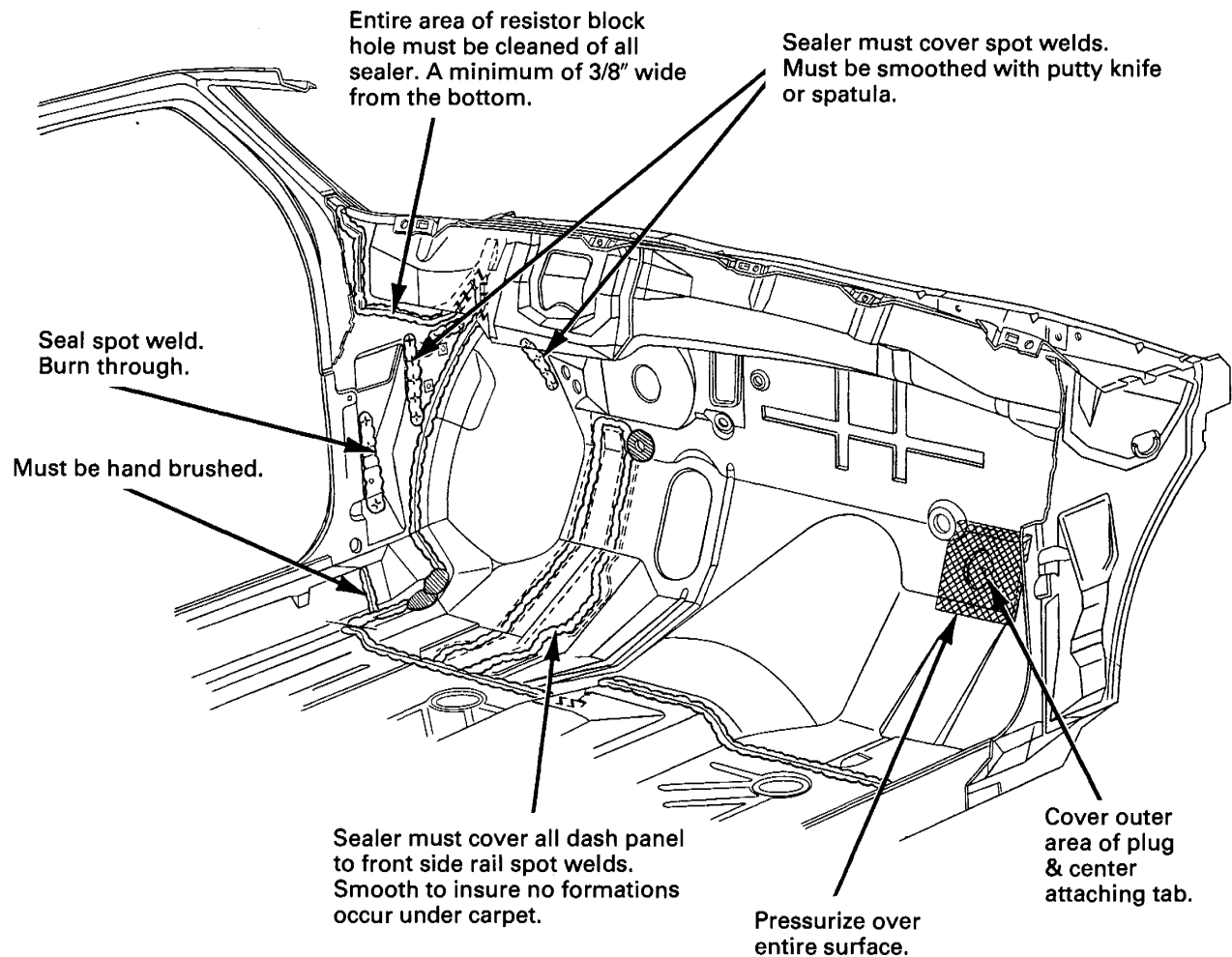
DASH PANEL, COWL TOP



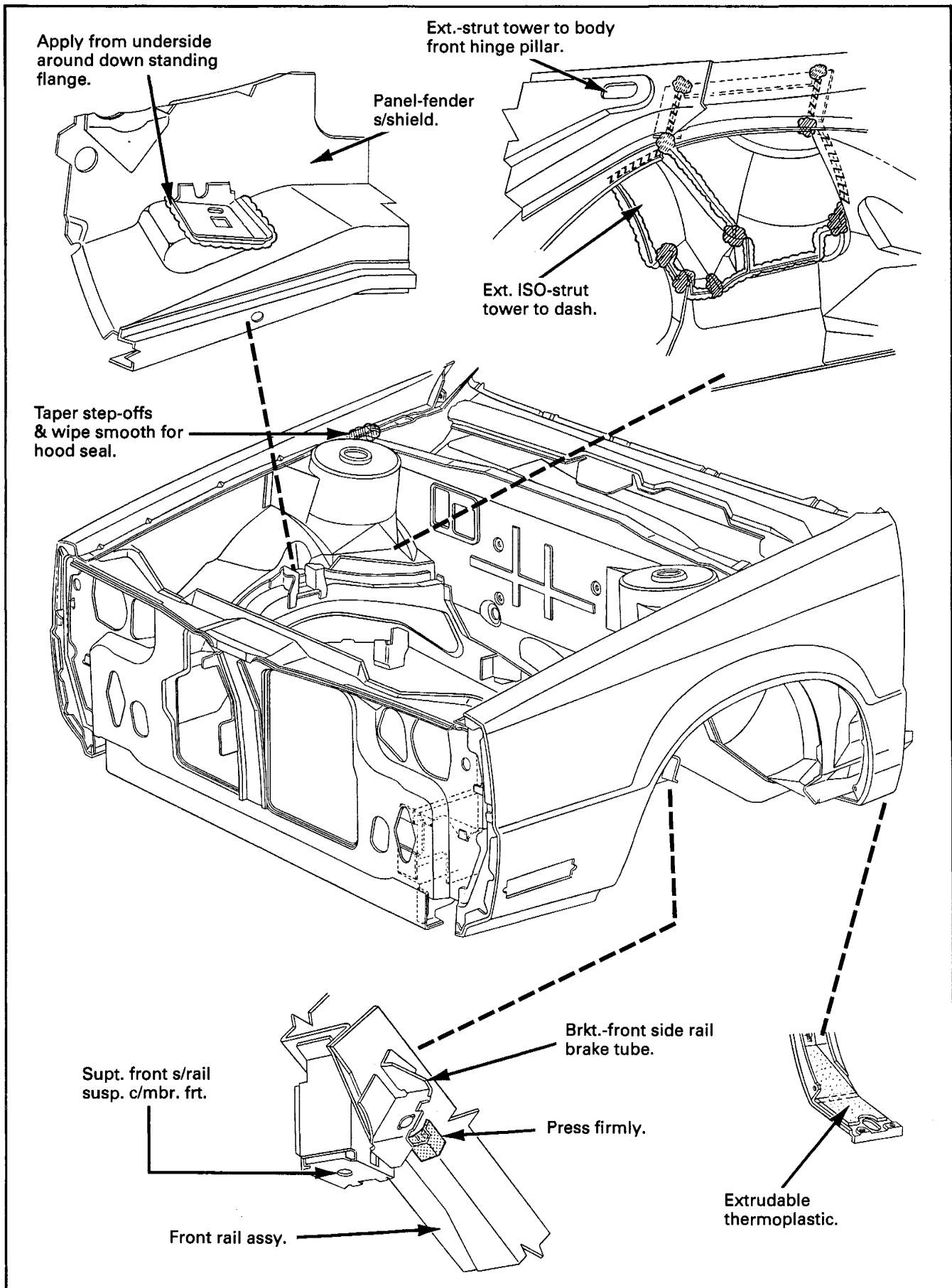


Body Sealing Locations

DASH PANEL-INSIDE



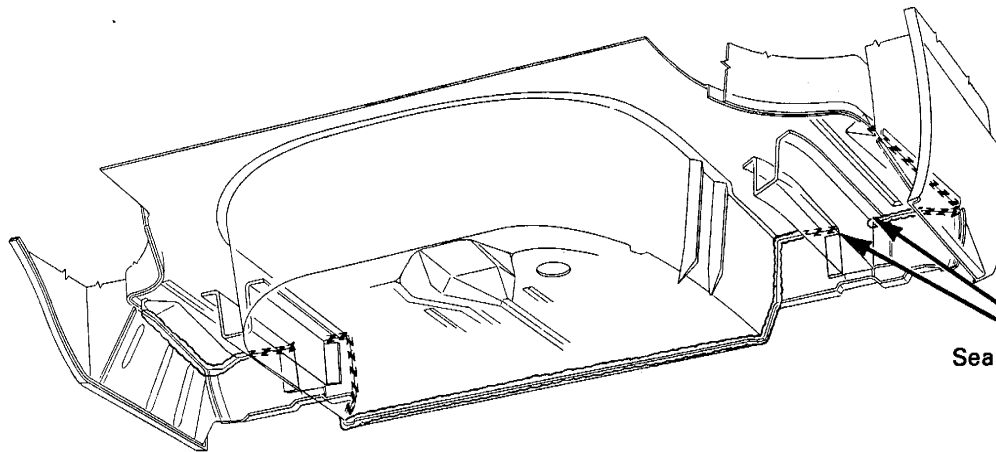
Body Sealing Locations





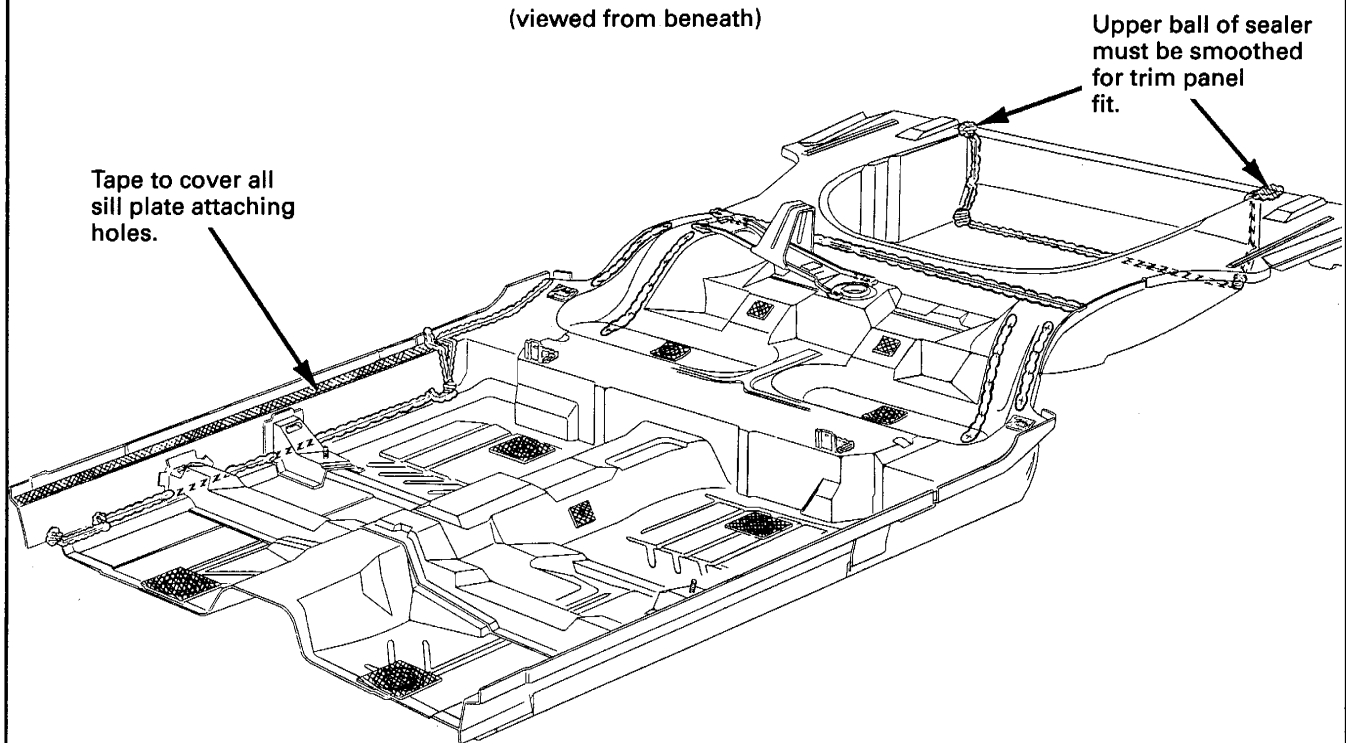
Body Sealing Locations

FLOOR PAN



Sealer stops at rail.

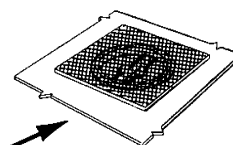
Rear Floor Pan (viewed from beneath)



Tape to cover all
sill plate attaching
holes.

Upper ball of sealer
must be smoothed
for trim panel
fit.

Note: Cover all MIG welds.

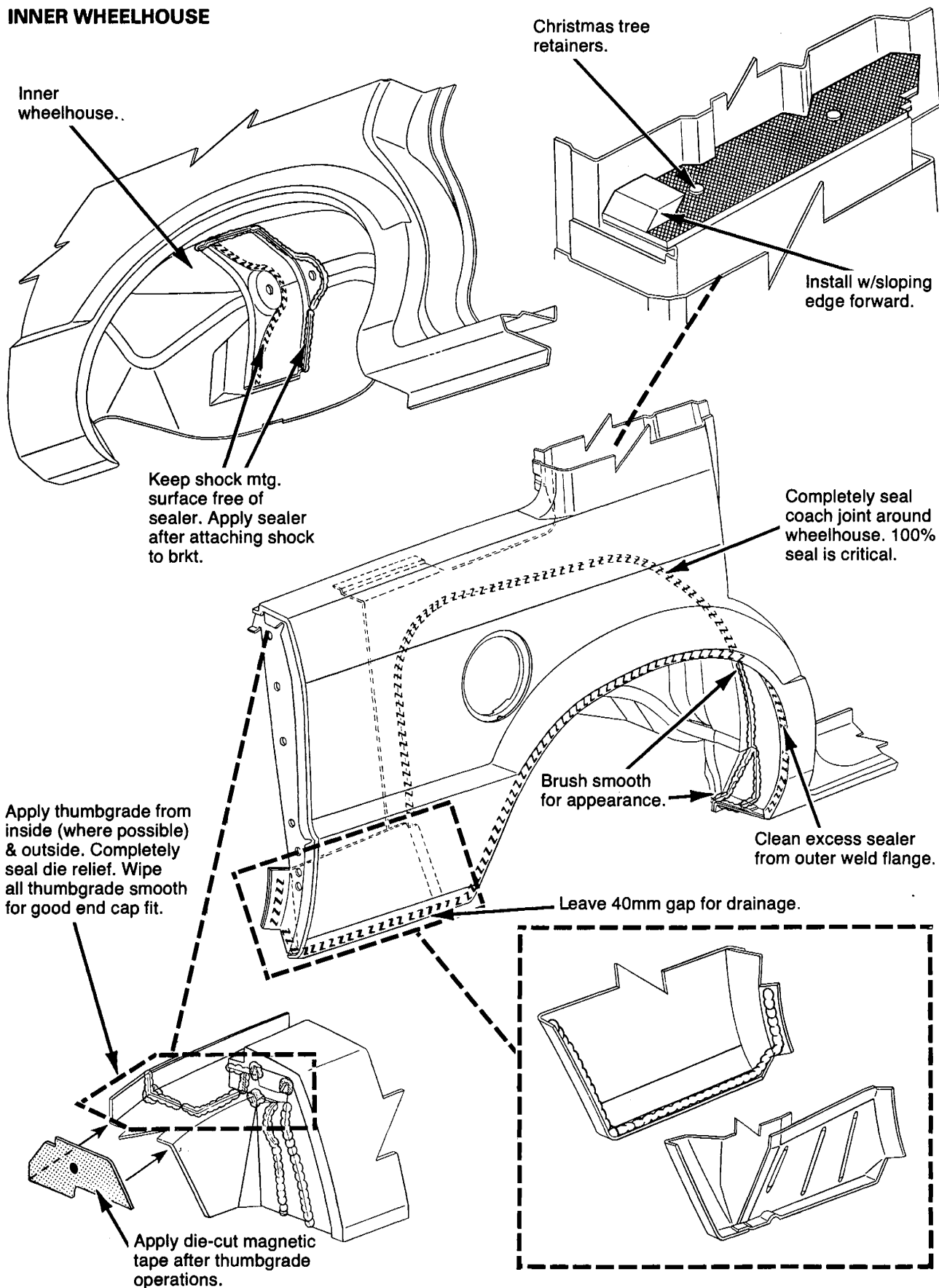


Completely seal
entire bang plugs.

Body Sealing Locations



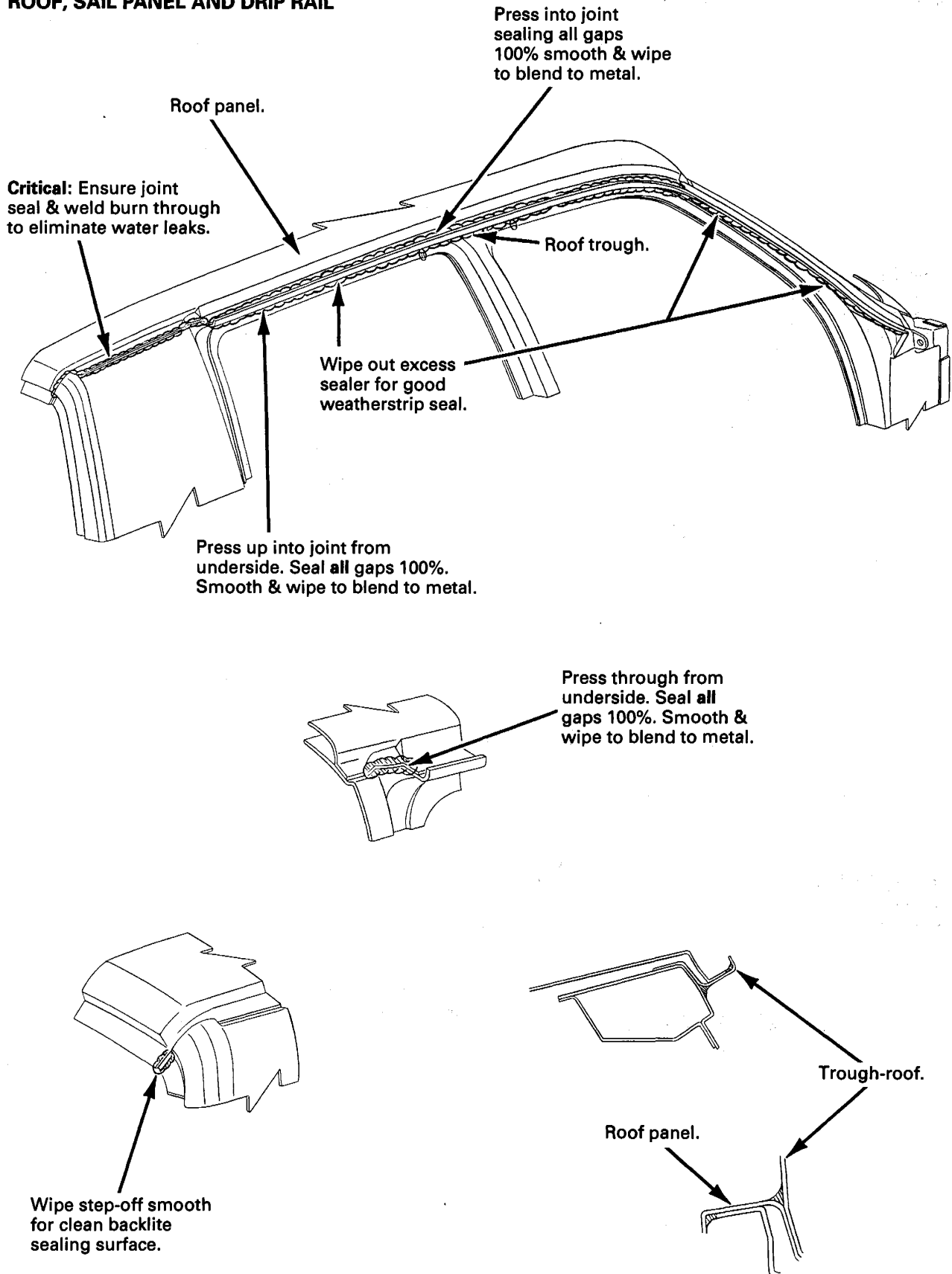
INNER WHEELHOUSE





Body Sealing Locations

ROOF, SAIL PANEL AND DRIP RAIL





REAR HALF AND QUARTER AREA

Seal all spot weld burn holes. Wipe clean for easy w/strip installation.

Wipe smooth for good w/strip seal.

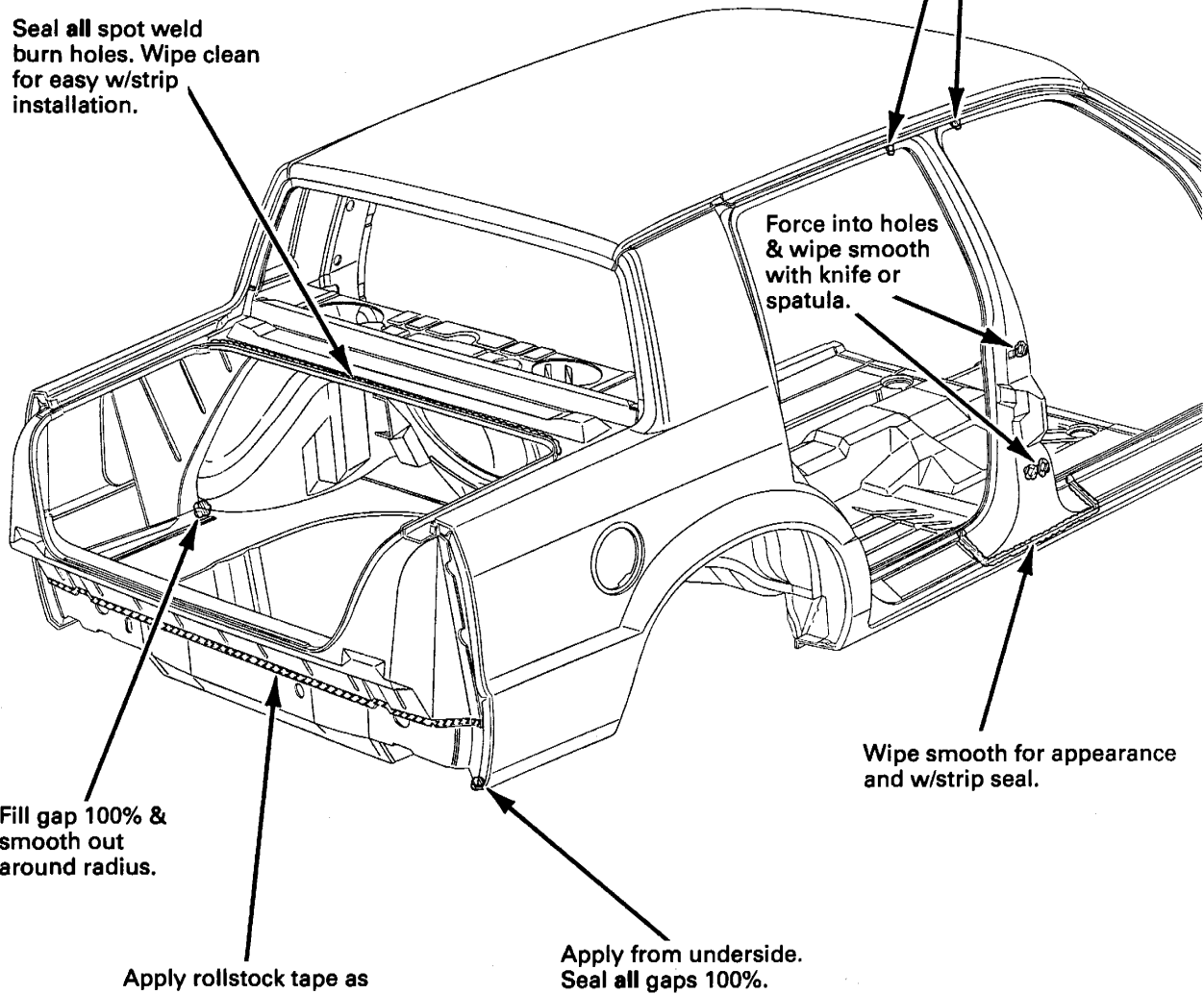
Force into holes & wipe smooth with knife or spatula.

Wipe smooth for appearance and w/strip seal.

Fill gap 100% & smooth out around radius.

Apply rollstock tape as shown to prevent excessive sealer blowout.

Apply from underside. Seal all gaps 100%.





Body Sealing Locations

REAR HALF AND QUARTER AREA

Side aperture
inside rear.

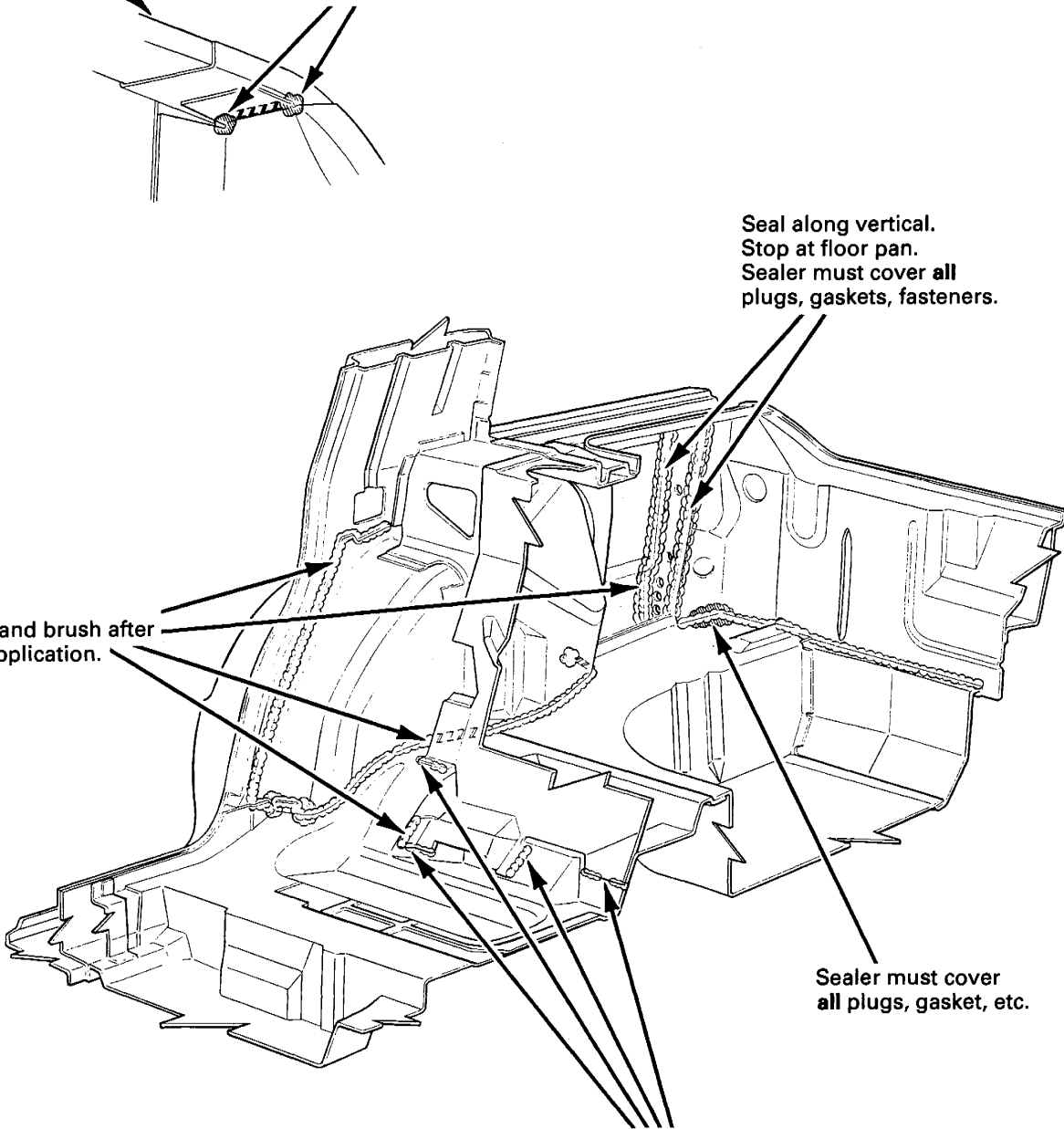
Completely seal two
die relief notches.
Blend smooth to metal.
Remove excess.

Hand brush after
application.

Seal along vertical.
Stop at floor pan.
Sealer must cover **all**
plugs, gaskets, fasteners.

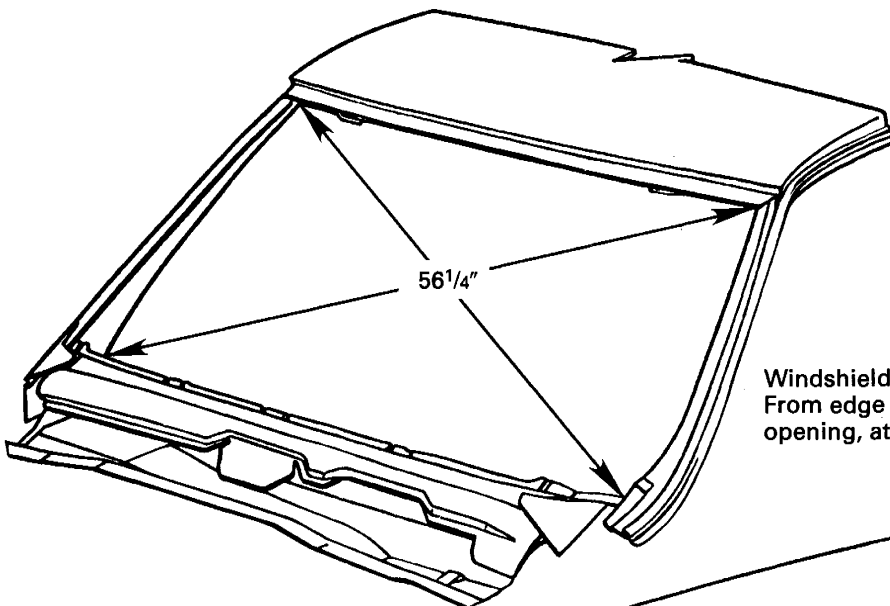
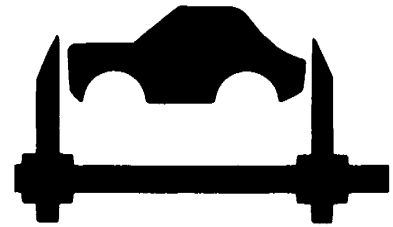
Sealer must cover
all plugs, gasket, etc.

Seal **all** MIG weld burn
holes at bulkhead to floor
pan welds.



C BODY

BODY DIMENSIONS & SPECIFICATIONS

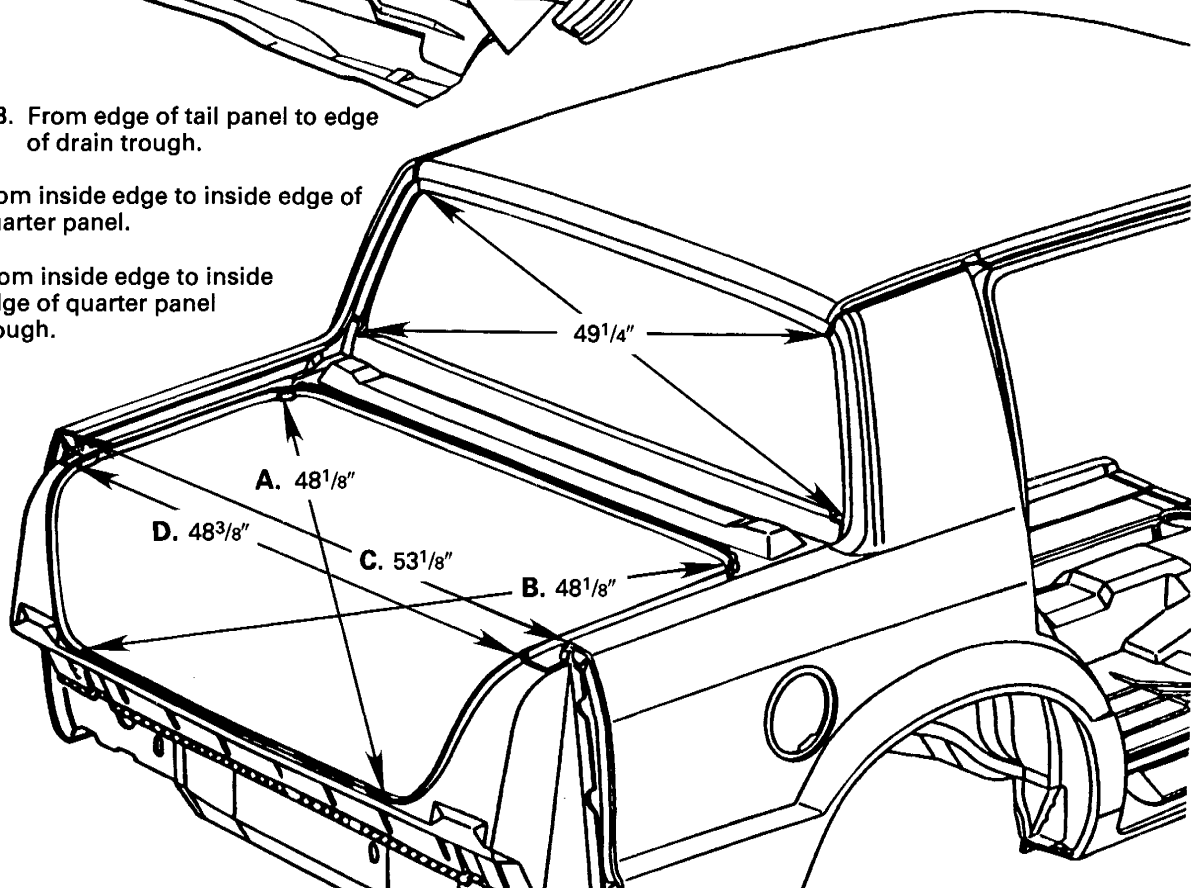


Windshield and backlite.
From edge of opening to edge of
opening, at the corners.

A. & B. From edge of tail panel to edge
of drain trough.

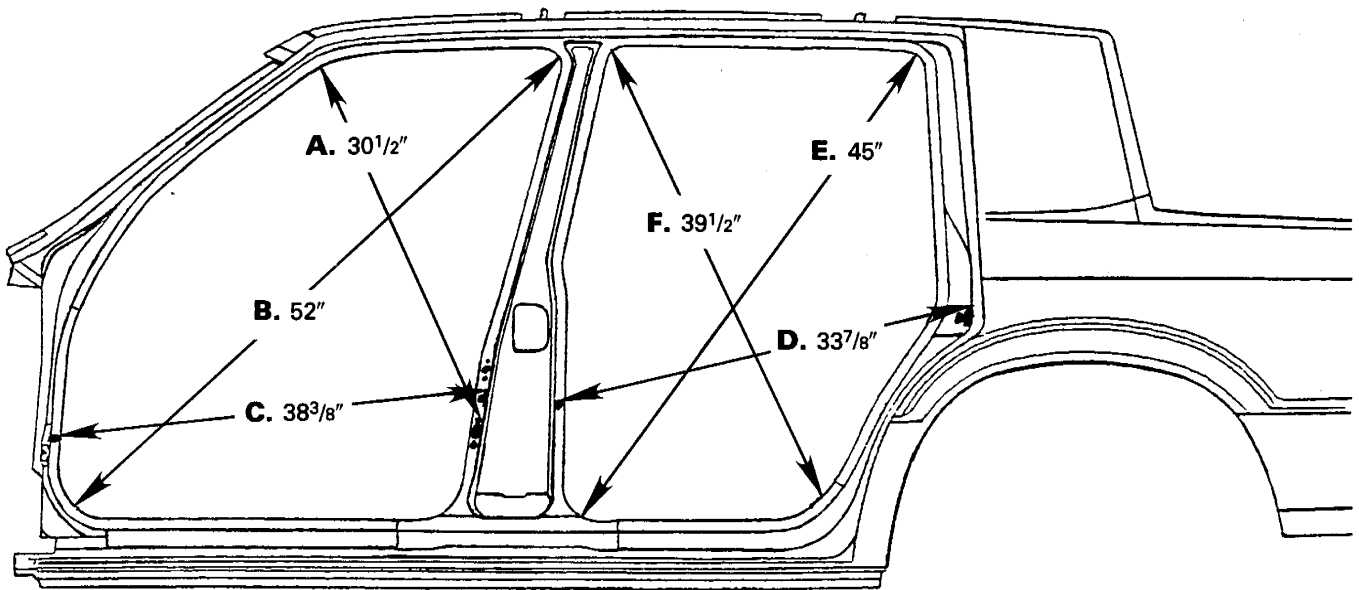
C. From inside edge to inside edge of
quarter panel.

D. From inside edge to inside
edge of quarter panel
trough.





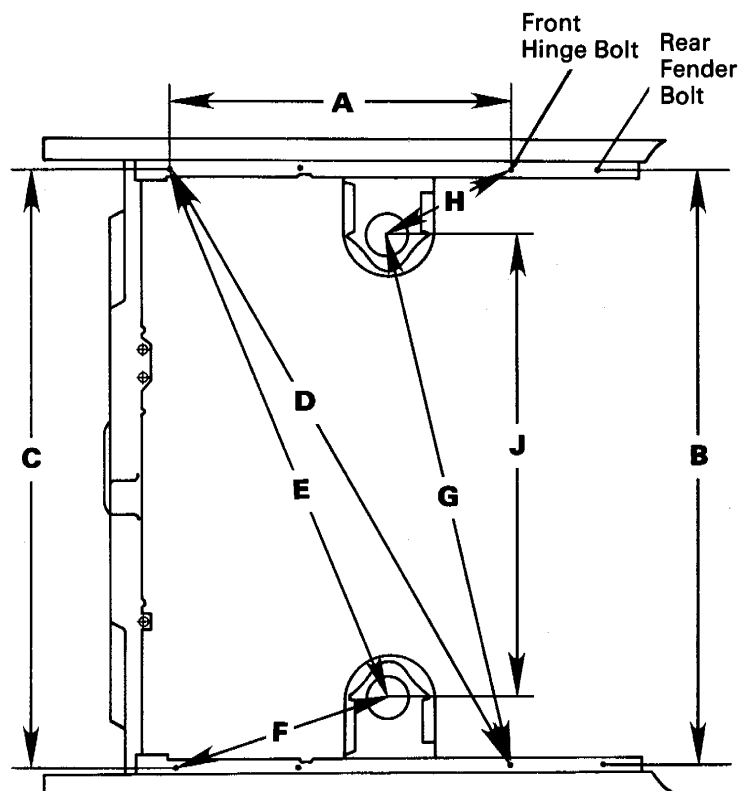
Body Dimensions and Specifications



- A. Center of radius at top to top screw seat belt switch.
 B. Center of radius at top to center of radius at bottom.
 C. Top edge of dome lite switch to just above striker plate.

- D. Top edge of dome lite switch to just above striker plate.
 E. Center of radius at top to center of radius at bottom.
 F. Center of radius at top to center of radius at bottom.

CENTER OF HOLE		
	MM.	IN.
A	82.233	$32\frac{3}{8}$
B	1400.175	$55\frac{1}{8}$
C	1343.03	$52\frac{7}{8}$
D	1593.85	$62\frac{3}{4}$
E	1374.775	$54\frac{1}{8}$
F	660.4	26
G	1254.13	$49\frac{3}{8}$
H	234.95	$9\frac{1}{4}$
J	1085.85	$42\frac{3}{4}$



Technical drawing of a vehicle chassis, showing front, side, and bottom views. The drawing includes numerous dimensions in inches and millimeters, and labels for various components.

Labels:

- REAR SUSPENSION HANGER BRACKET (FRONT OUTBOARD ATTACHING SCREW)
- STRUT DAMPER MOUNTING TOWER (CENTER TO CENTER)
- ENGINE MOUNTING BRACKETS
- FRONT SUSPENSION CROSSMEMBER (REF.)
- TRACK BAR DIAGONAL BRACE STUD
- FRAME RAIL/FRONT SUSPENSION CROSSMEMBER ATTACHING POINT*
- *LOCATE CENTER OF UPPER STRUT DAMPER MOUNTING TOWERS FROM THESE PRINCIPAL LOCATING POINTS

Dimensions (Inches):

- 1052.00 (41.42)
- 1055.20 (41.54) K, E, J, A, C, Y
- 1055.05 (41.54) G, P
- 1055.05 (41.54) H
- 1718.81 C, Y
- 1701.54 (64.11) K, J
- 1701.54 (64.11) E
- 1572.66 (61.92) G
- 1572.66 (61.92) H
- 1920.61 (75.61) K, J
- 1986.55 (78.21) E
- 1864.78 (73.02) G, P
- 1986.55 (78.21) H
- 1966.56 - C, A
- 1179.00 (46.42)
- 489.5 (19.27)
- 655.3 (25.80) K, J
- 731.2 (28.79) E, C
- 578.2 (22.76) G
- 578.2 (22.76) H, P
- 1214.0 (47.8) C, Y
- 1138.00 (44.80) K, J
- 1214.0 (47.40) E
- 1061.00 (41.77) G
- 1061.00 (41.77) H, P
- 1237.00 (48.70) K, J
- 1313.2 (51.70) E
- 1160.0 (45.67) G, P
- 1313.2 (51.70) H, C, A
- 473.86 (18.65)
- 303.14 (11.93)
- 525.51 (20.69)
- 572.00 (22.52)
- 349.53 (13.76)
- 586.3 (23.08)
- 670.00 (26.38)
- 648.00 (25.51)
- 576.20 (22.39)
- 498.65 (19.63)
- 725.5 (28.56)
- 743.5 (29.27)
- 614.5 (24.19)

Dimensions (Millimeters):

- 1052.00 (41.42)
- 1055.20 (41.54) K, E, J, A, C, Y
- 1055.05 (41.54) G, P
- 1055.05 (41.54) H
- 1718.81 C, Y
- 1701.54 (64.11) K, J
- 1701.54 (64.11) E
- 1572.66 (61.92) G
- 1572.66 (61.92) H
- 1920.61 (75.61) K, J
- 1986.55 (78.21) E
- 1864.78 (73.02) G, P
- 1986.55 (78.21) H
- 1966.56 - C, A
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- 576.20 (22.39)
- 498.65 (19.63)
- 725.5 (28.56)
- 743.5 (29.27)
- 614.5 (24.19)

Views:

- FRONT VIEW
- RIGHT SIDE VIEW
- LEFT SIDE VIEW
- TOP VIEW
- BOTTOM VIEW

DATUM LINE

DIMENSIONS 000.00MM (00.00) INCH